

Consumers' Research

BULLETIN

JANUARY • 1956

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Consumers' Research functions to provide unbiased information on goods bought by ultimate consumers. For their benefit (not for business or industry) and solely with the funds they provide, CR carries on tests and research on a wide variety of goods, materials, and appliances; and publishes the findings in CR BULLETIN. Consumers' Research is a non-profit institution, and is organized and operates as a scientific, technical, and educational organization.

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OFF THE EDITOR'S CHEST

LAST FALL an exchange student from overseas doing some graduate work in the United States asked permission to visit CR's laboratories and discuss the place of the consumer movement in this country. It was his observation, after a brief survey, that the vigorous expansion of American industry in post-war years had not been matched in the consumer field, where he felt there was a certain slackening of activity. In the course of his visit, it came out that his impression was chiefly due to a report from certain women's organizations that they were not emphasizing consumer activities at this time.

As we pointed out, to discuss intelligently whether the consumer movement has lost some of its vigor, it is necessary to define the term "consumer movement." Since the publication of Your Money's Worth in 1927, which was the first book to crystallize the concept of consumers as an entity to be reckoned with in the American system of mass production and mass marketing, there have been many attempts to use "consumers" as a front or stalking horse for welfare and statist or government-directed activities of one sort or another, or as an adjunct to left-wing-labor propaganda and lobbying activities. These efforts quite naturally failed, because the consumer is much too important a factor in the American economy to be used successfully for very long as a front by any special-interest group. Furthermore, the typical American consumer is a person far too intelligent and busy with his own affairs to devote much time or support to welfare or propaganda groups that have no practical, useful service to offer him. As a matter of fact, by his own economic activities, particularly by his buying and refusing to buy, he does just as well or better than if there were pressure groups and lobbies operating in his behalf on legislators as is the case with groups serving organized labor and business. Actually it is the consumer who provides sales for the businessman and wages for labor.

(Continued on page 24)

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It will be advantageous if you will, whenever possible, send prompt notice of change of address at least 5 weeks before it is to take effect, accompanying your notice with statement of your old address with name in full. At least a month's notice must be given in any case. **This rule, however, regarding long advance notice does not apply to military personnel. CR will, of course, gladly change addresses for men and women in the services as often as required by changes in station and other circumstances.**

Symbols used to indicate sources of data and bases of ratings: AA—regarded as worthy of highest recommendation; A—recommended on basis of quality; B—intermediate with respect to quality; C—not recommended on basis of quality; cr—information from Consumers' Research's own tests or investigations; 1, 2, 3—relative prices, 1 being low, 3 high. Note that price and quality are completely differentiated in CR's listings; a **quality judgment is independent of price**; 55, 56—year in which test was made or information obtained or organized by the staff of Consumers' Research.

The Consumers' Observation Post

THOSE UNFORTUNATE AUTOMOBILE OWNERS who at some time in their lives have purchased what is known as a "lemon" will be interested in a decision rendered by Judge C. Thomas Schettino, in Superior Court of New Jersey, Chancery Division, Monmouth County. The case in question involved a new station wagon which from the first day of its purchase had a number of defects including a rattle in the upper left rear of the body, a bubble in the glass of a window, indentations in the fenders and both sides of the roof, and paint defects in the tail gate. The purchaser duly reported these faults well within the 90-day guarantee period, and the dealer attempted to remedy them but without success. The warranty that accompanied the car called for making good on any mechanical defects, and this the purchaser concluded was not done, in spite of the efforts of the dealer. Since the difficulties were not adjusted to the customer's satisfaction, he brought suit claiming that he should have had a new car in perfect condition in view of the warranty's claim that the dealer was obligated to making "good . . . the defective part or parts referred to within the warranty period, without charge for replacement labor." The Judge agreed and ordered the dealer to return the full purchase price to the purchaser. The manufacturer was excluded from the judgment because none of the parties involved had taken proper steps to notify the company.

INSTANT COFFEES have been heavily promoted recently in certain areas, sometimes at cut prices, particularly in New York-New England sections. The Wall Street Journal reports that consumption of instant coffee holds about 30% of the coffee market. The intense competition among the 5 or 6 best selling brands keeps prices down on instant coffee in spite of the fact that ground coffee went up last fall. Prices for instant brands run from 35 cents a 2-ounce jar for the Edward's Instant put out by Safeway Stores, Inc., to 59 cents for a 2-ounce jar of the Borden product and other advertised brands. It is reported that there are about 13 processors turning out 185 brands of instant coffee.

PRICES OF A GOOD MANY THINGS that consumers buy are going up. The operating costs of the distributor and the increased manufacturing costs are slowly being passed on to the consumer, reports a financial newsletter, which comments that only the utmost ingenuity on the operating side and imaginative promotion on the sales side have kept prices from rising more rapidly.

WATCHING A TELEVISION PROGRAM at the neighbors and then driving home directly afterward is not always a good idea. According to a little item in the Canadian Automotive Trade journal, it takes approximately 20 minutes in a normally lighted room after viewing television to allow the eyes time for adjustment to the requirements of night driving. Don't hurry out right after your favorite program is finished.

SPECIAL FEATURES IN GAS RANGES, including barbecue oven broilers, rotisseries, timers for shutting off or turning down burners, and a number of other features are available on various makes. A comprehensive list of the special features and what brands carry them is well presented in a little circular available at 10 cents from the American Gas Association, 420 Lexington Avenue, New York 17. The chart also gives the names and addresses of the manufacturers so that prospective buyers can write for catalogs, prices, and other information.

FROZEN FOODS often suffer a loss in flavor by improper handling in the grocery store. As we pointed out last month, some deterioration may occur when frozen food cannot be kept at a low enough temperature in freight cars. Further deterioration may be caused by storing frozen food in an open back room of a grocery store before putting it in the display freezer, according to Arthur D. Little, Inc. Even the use of a meat cooler for temporarily holding frozen products results in some thawing and loss of flavor. In several states legislation to regulate the handling of frozen food in order to maintain its quality is pending.

* * *

THE COST OF REPAIRING some small electrical appliances, such as electric clocks, toasters, coffee makers, and fans, is too high to be practical for the average housewares repairman, according to an executive of a California firm reported in Retailing Daily. The service executive commented that there were some small appliances which actually cost less to buy new than to repair and, in other cases, repair charges on a number of items are rapidly approaching 50 percent of the retail price. The largest single item in the cost of repair is labor, and good repairmen usually receive high wages.

* * *

SOMETHING NEW to look for in buying rayon and acetate fabrics recently made its appearance when Reeve Brothers, Inc., announced that its new Bishop Mill finishing plant at Bishopville, South Carolina, would make viscose and acetate fabrics for men's, women's, and children's wear in accordance with the recommendations of American Standard L22. Garments made from these fabrics will carry a label reading: " 'Bishopville Finished' according to standards approved by American Standards Association for performance dependability...." It would have been a little more accurate if the tag had referred to the Standard as American Standard L22 and had given the identifying number of the Standard indicating the end use of the product, since material intended for making draperies could be finished according to American Standard L22 requirements and still not be suitable for use in a child's dress. The label is, however, a step in the right direction, and the company is to be commended for getting out a fabric labeled as meeting the requirements of the L22 Standard (Performance Requirements for Rayon and Acetate Fabrics). It is hoped that women will generally support this move and ask for the labeled Bishopville fabrics when they go shopping. The National Retail Dry Goods Association has urged its member stores to buy garments which feature this hang tag.

* * *

MACARONI AND SPAGHETTI will be improved in quality this year. The crop of durum wheat is reported to be four times that of 1954, and manufacturers have upped the durum wheat content of their products, which makes for better quality. This year it should be as high as 50 percent.

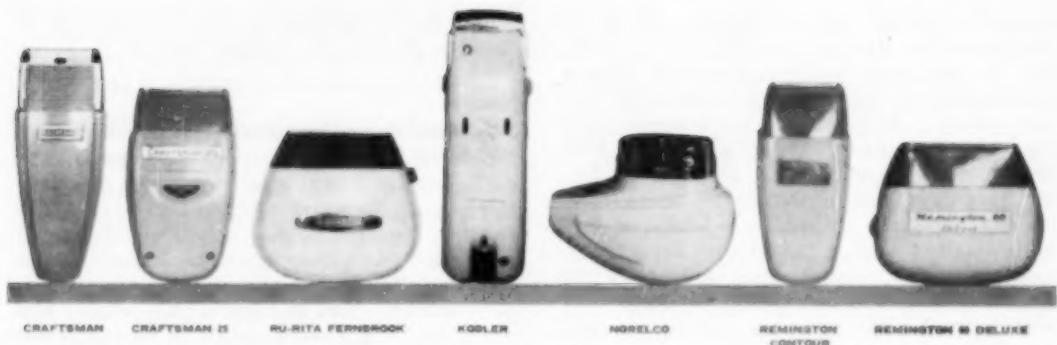
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VOLKSWAGEN'S NEW KARMANN-GHIA, priced at \$2395, scheduled to be made in the new assembly plant at New Brunswick, N.J., is not only a new model, but a newly-designed car. The old model, made without change since 1936, will also be turned out in the new plant and will continue to be available at a much lower price than the new "glamor" model.

* * *

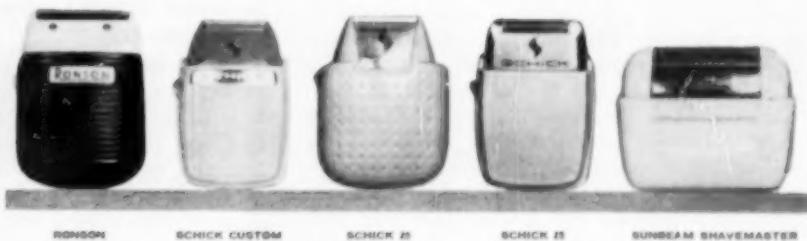
THE INSPECTION SERVICE of the Meat Grading Section of the U.S. Department of Agriculture has been called on for years to provide inspection service for various steamship companies. This inspection, paid for by the various companies, has been regarded as an important safeguard for making certain that the buyers were getting what they paid for, and the Commissary Departments of the various shipping companies considered the service important and essential. Now the Marine News for September 1955 reports with

(The continuation of this section is on page 33)



CRAFTSMAN CRAFTSMAN 25 RU-RITA FERNBROOK KOHLER NORELCO REMINGTON CONTOUR REMINGTON 90 DELUXE

Electric Shavers



RONSON SCHICK CUSTOM SCHICK 25 SCHICK 25 SUNBEAM SHAVEMASTER

WHILE opinions differ on the merits of the popular electric shavers as compared with safety razors, the electric shaver does offer certain advantages. Once a man has become accustomed to using a shaver, he can obtain a satisfactory shave in less time, without the fuss and bother of lathering and "working in" and washing off lather required with a razor. Shaving time with one of the faster shavers will normally range from about one minute to two minutes for a quick or "passable" shave to about five or six minutes for a closer and more careful shave. The slower shavers may require as much as 10 minutes for a good job. While most men who use an electric shaver will find it necessary to shave again just before going out for the evening, this kind of shave is often a bit easier on the face than a second shave with a safety razor. The quality of the shave one gets will depend partly on the kind of shaver used, and its condition, and partly on the characteristics of one's beard.

Every electric shaver will shave or remove hair, but some do only a passable or fair job. Some shavers cut closely with relatively few strokes, while others require going over the same area a number of times in order to give an acceptable result. Some shavers remove the hair

quickly, but not closely, regardless of the number of strokes.

Almost every shaver requires a different technique in use to suit the user's beard. There are a few basic requirements, however, to help give best results. These are as follows:

- (1) Wash face and neck with soap and water to remove facial oils and dry thoroughly;
- (2) move shaver head back and forth using short strokes, against the direction of growth of beard, or with a circular motion;
- (3) use gentle pressure;
- (4) keep shaving head flat on the skin and in close contact with it at all times while shaving;
- (5) get to know the peculiarities of your beard's growth and learn how best to handle the shaver for different parts of the face and neck;
- (6) keep the parts of the shaver clean and dry.

Anyone who is in a position to do so should buy an electric shaver on a basis which will give him a trial period of at least a week with full refund at the end of that time if he is not satisfied. It will pay to get complete information on the frequency of servicing recommended, what the service charge will be, and the price of replacement heads, cutters, and other major parts that might need replacement. Regular servicing, such as every three to six months as recommended by Remington, can be quite ex-

pensive. Another item of expense will be replacement from time to time of the head and cutter. In the more moderate range are *Ronson* (\$1.50 head and \$2 cutter) and *Sunbeam* (\$3 head and cutter). *Remington 60* replacement parts are rather expensive (\$13.50 for complete head and cutter replacement). It will be seen that servicing of an electric shaver can be quite expensive, especially if one has a little bad luck with a fall or impact that causes breakage or other damage. Servicing can easily bring the cost of shaving up to a much higher figure than was involved in the safety razor previously used.

Test results

In the tests conducted by CR, the closeness of shave was determined by using each shaver in a normal manner followed by a second shaver of another brand. The material removed by the second shaver, representing beard hairs and bits of skin missed by the first of the two shavers, was weighed on a sensitive balance; the particles were examined microscopically with suitable magnification to differentiate between hair clippings and flakes of skin. These observations provided a basis for rating when combined with extensive comparative use tests by 10 men of CR's staff who judged effectiveness of each shaver, its ease and comfort in use. Weight was also given to the ease with which the various shavers could be cleaned after use.

A summary of the test results covering closeness of shaving for each shaver included in the test is presented in the following paragraphs.

Additional information on each shaver can be found in the listings on pages 7 and 8.

Ronson

This shaver was the first choice for closeness of the shave, speed, and comfort in shaving of the daily beard. It was relatively quiet in operation, but a degree of vibration was communicated to the hand holding the shaver that some men might find objectionable. Trimming the "sideburns" was somewhat difficult but the difference from other shavers in this respect was not great. The *Ronson* cannot be recommended for removing long hairs, such as those on arms or legs.

Sunbeam, Schick Custom, Schick 25, Norelco, Remington 60

Each of these shavers provided a satisfactory shave, but their performance was not comparable to that of the *Ronson*. The *Sunbeam* was fast and gave a close shave but caused slight smarting and some pulling of the hairs. It was relatively noisy. The *Schick Custom* and *Schick 25* gave good shaves but required more time, to match the quality of the *Sunbeam* shave. The *Norelco* also gave a good shave, but was even slower than the *Schick 25* and *Schick Custom*. The *Norelco*, *Schick 25*, and *Schick Custom* were quiet in operation. The *Remington 60*, while it provided a good shave and a relatively fast one, caused considerable smarting and stinging, especially on the neck. It was noisy. All the shavers

Number of Pieces to be Cleaned

One piece



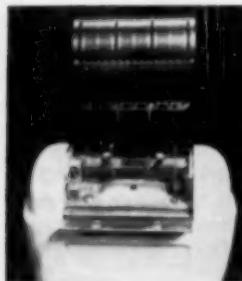
Schick 20
Schick 25
Schick Custom

Two pieces



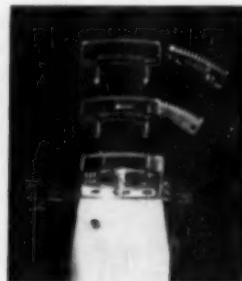
Craftsman 25
Remington 60
Remington Contour
Ronson

Three pieces



Craftsman
Norelco
Sunbeam Shavemaster

Seven pieces



Fernbrook
Kobler

in this group, at best, did a fair job in trimming "sideburns." They were effective in removing long hairs, except the *Sunbeam* which was not as efficient as the others in this respect.

Schick 20, Remington Contour, Craftsman 25, Craftsman, Kobler

These shavers did a somewhat less satisfactory job than those listed in the second group just described. The *Schick 20* and *Kobler*, although quieter in operation than the other three in this group, shaved more slowly. The *Kobler* shaver was also considered too heavy.

Ru-Rita Fernbrook

This shaver did not cut closely. It was relatively bulky, and considered noisy, and caused noticeable smarting and stinging.

Other features

The running speed of a shaver will often have a noticeable effect on its performance. Most shavers that are operated on a lower-than-normal voltage, which is often found on household electrical circuits, will operate at a correspondingly slower speed, resulting in a poorer shave or a longer shaving period in order to match the shave received when the voltage is higher. This is important where line voltages fluctuate considerably, especially with those shavers which shave rather slowly under normal conditions.

In most areas the power company aims to supply a steady line voltage somewhere between 115 and 120 volts. However, there are times when the voltage falls outside of this range and in order to cover all likely conditions which may occur, including use of the shaver with reduced voltage in an automobile with the aid of an "inverter," the shavers were tested at 100 and 135 volts. Speed changes were measured with a system which included an electromagnetic transducer, oscilloscope, and an audio oscillator; a check was made by use of a General Radio Corp. *Strobotac*. All the shavers except the *Ronson* showed noticeable differences in their speeds at the two extreme voltages. The *Ronson*, because of the nature of its motor, showed no change in speed at either voltage. The decrease in speed on the other shavers when run on 100 volts as compared to the speed when run at 118 volts ranged from 10 to 13 percent on the remaining shavers except the *Kobler* and *Norelco*, which ran a little less than 20 percent slower.

A shaver should be so designed that it can be easily cleaned. The illustrations show the several ways in which the cutters and heads are

arranged. The *Schick* shavers are designed in one-piece permanently-assembled units and can be cleaned merely by opening the plastic "wings." Others, such as the *Ronson*, *Remington 60*, and *Craftsman 25*, require removal of the heads or hair pockets. The *Sunbeam* requires the removal of the head and the cutter, and thus there are three pieces to handle and clean. The *Kobler* and *Fernbrook* shavers are so designed that each of the three heads, consisting of two parts each, must be removed; these, with the shaver itself, make a total of seven pieces. These last-named two shavers, particularly the *Fernbrook*, were thus difficult and time-consuming to clean.

All the shavers were checked for electrical safety. Unless otherwise noted in the listings, the shavers passed the proof-voltage test established by the Underwriters' Laboratories for electric shavers which requires that they withstand 2500 volts, 60 cycles, a.c., for one minute.

The weight of each shaver with its cord is given, as information useful for those who may want to buy a shaver which is no heavier than necessary. Most shavers fell in the range of 10 to 12 ounces, but there was one as light as 9 ounces and one as heavy as 15 ounces. The cords were detachable, and 70 to 74 inches long, unless otherwise noted.

A. Recommended

Ronson (The Ronson Electric Shaver Corp., 59 Commerce Rd., Stamford, Conn.) \$19.95 packaged in soft plastic case, \$22.50 in leather zipper case, \$26.50 in the "Trip-Kit" (includes: leather case, comb, nail file, toothbrush, tooth paste, and a mirror). Weight, 10 oz. Operates on alternating current only. Cannot be used in an automobile with conversion devices, such as the *Kar-Shave*, designed to supply a power source for 110-volt ac-dc electric shavers from a 6-volt automobile battery. The *Ronson* will, however, work with such inverters as *Powercon* or *Terado TravElectric* and the type of inverter designed as a power source for operating portable tape recorders or dictating machines in an automobile, as these latter inverters provide an a-c output. *Sturdy synchronous vibratory drive-unit. No radio or television interference. Readily cleaned. Said to require no oiling.

* * *

The following four shavers (listed in alphabetical order) provided good shaves, but were somewhat less satisfactory than the *Ronson*.

Norelco (North American Philips Co., Inc., 100 E. 42 St., New York 17) \$24.95. Weight, 10 oz. For a.c. or d.c. Well-made commutator-type motor. Capable of providing a good shave, but was relatively slow. There was a trace of radio and television interference. Shaver was readily cleaned. Said to require no oiling.

Remington 60 Deluxe (Remington Rand, Inc., Electric Shaver Div., Bridgeport 2, Conn.) \$29.50. Weight,

12 oz. Contactor-type motor. A.c. or d.c. Ran noticeably warm after about 15 minutes' use. There was a tendency to irritate skin of the face and particularly of the neck. There was a trace of radio and television interference. Readily cleaned. Instruction book recommends that owner have the *Remington* electric shaver checked by "factory-trained consultants" every three to six months to insure most efficient shaving results. Such a policy can be, and is, according to some CR subscribers, an expensive one; besides, the user will have to do without his shaver for several days if he sends it in by mail.

Schick 25 (Schick, Inc., Lancaster, Pa.) \$29.50. Weight, 10 oz. Detachable electrical cord, 59 in. long (too short). Contactor-type motor. A.c. or d.c. Provided a good shave but was somewhat slow. There was a trace of television interference, and bad radio interference. Readily cleaned. Instructions call for a drop of oil on the shearing head once a week, greasing the lower side of the shearing head once every three months, and oiling the motor once every six months. Special oil and grease are available in a kit at 75c extra. Ran warm.

Sunbeam Shavemaster (Sunbeam Corp., 5600 Roosevelt Rd., Chicago 50) \$29.95. Weight, 12 oz. Detachable electrical cord, 59 in. long (too short). A.c. or d.c. Well-made commutator-type motor. Gave a good close shave but produced burning sensation at lip and on neck of some users and had a tendency to pull hairs when moving against the growth of the hair, unless the shaving was done slowly. There was considerable radio and television interference. This shaver was more difficult to clean than some of the others. Ran warm.

B. Intermediate

Craftsman (Sears-Roebuck's Cat. No. 9-9282) \$17.50, plus postage. Weight, 13 oz. Contactor-type motor. A.c. or d.c. There was a tendency to irritate the skin of the neck. There were traces of radio and television interference. The shaver was readily cleaned. No oiling required. Appeared to be made by Remington as motors and heads were similar.

Craftsman 25 (Sears-Roebuck's Cat. No. 9-9283) \$19.95, plus postage. Weight, 12 oz. Contactor-type motor. A.c. or d.c. There was a tendency to irritate the skin of the neck. There were traces of radio and television interference. The shaver was readily cleaned.

Recommended Book for the Home Craftsman

THE Rockwell Manufacturing Company, Delta Power Tool Division, 400 North Lexington Ave., Pittsburgh 8, have available, at \$1, a very useful book of 115 pages entitled Practical Finishing Methods. Some of the more important subjects discussed are finishing with the brush, finishing with the spray gun, preparing the surface, stains and staining, fillers and sealers, varnish and varnishing, lacquer and syn-

No oiling required. (See final comment in *Craftsman* listing above.)

Schick 20 (Schick, Inc.) \$26.50. Weight, 10 oz. Detachable electrical cord, 59 in. long (too short). Contactor-type motor. A.c. or d.c. There was bad radio interference and a trace of television interference. The shaver was readily cleaned. Instructions call for a drop of oil on the shearing head once a week, and for greasing the lower side of the shearing head once every three months, and for oiling motor once every six months.

C. Not Recommended

Kobler (Made in Zurich, Switzerland; Kobler Shaver Co., Lynbrook, N.Y.) \$39.75. Weight, 15 oz. Non-detachable electrical cord, 78 in. long. Contactor-type motor. A.c. or d.c. Can be connected to any circuit between 110 and 220 volts merely by setting the voltage selector to 110, 150, or 220 volts. Provided a satisfactory shave, but was rather slow. There was radio and television interference. This shaver was considered hard to clean. No oiling required. Failed proof-voltage test, more than ordinarily important fault in this instance, considering that the *Kobler* is intended for use on voltages as high as 150 and 220.

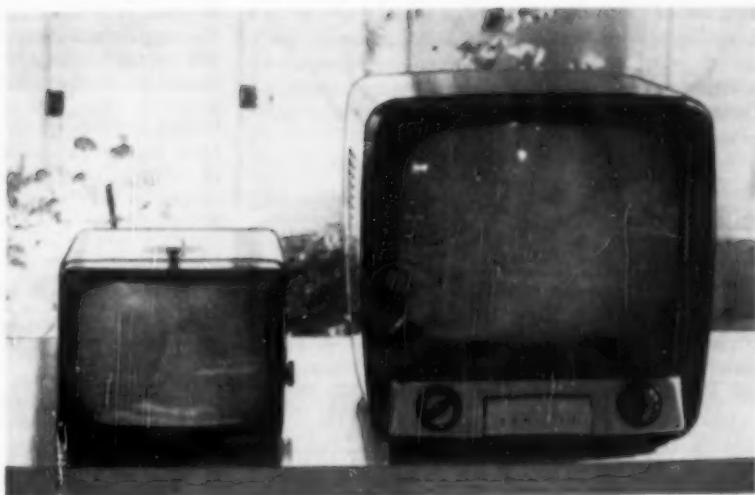
Remington Contour (Remington Rand, Inc.) \$23.50. Weight, 12 oz. Contactor-type motor. A.c. or d.c. There was a tendency to irritate the skin of the neck. There was bad radio interference and a trace of television interference. The shaver was readily cleaned. See *Remington 60 Deluxe* for comments about the need to return the shaver for servicing every three to six months. Failed proof-voltage test.

Ru-Rita Fernbrook (Made in England; Quality British Corp., 120 Liberty St., New York 6) \$19.95. Weight, 11 oz. Contactor-type motor. A.c. or d.c. Has voltage selector to permit use on 110 or 220 volts as desired. Shave was only fair, and the shaver caused considerable irritation on the skin of the face and particularly of the neck. There was radio and television interference. Considered hard to clean. No oiling required.

Schick Custom (Schick, Inc.) \$28.75. Weight, 9 oz. (lightest of the shavers tested). Detachable electrical cord, 59 in. long (too short). Contactor-type motor. A.c. or d.c. Failed proof-voltage test. *See comments under *Schick 25*.

thetic finishes, waxes and wax finishing, rubbing and polishing, special treatment of various woods, bleaching, furniture finishes, patching damaged furniture surfaces, metal cleaning and finishing, and walls and woodwork. The book has about 160 good illustrations showing the tools that are used and how the work is done; it should be useful for anyone working with wood as a hobby or building or repairing furniture.

The General Electric Portable (left) is much smaller and lighter than a more conventional 21-inch receiver. Its 32 pounds, however, would still be too much of a "load" for any but a strong and well-grown child.



1956 TV Receivers

With some good advice on how to avoid being gypped in buying a set and on servicing

WHEN deciding upon the receivers to be included in CR's tests, Consumers' Research chooses samples from the lines of those manufacturers who sell the greater proportion of all the receivers marketed. Some makes are tested only every second or third year. Others, because of their quite limited sales, are seldom, if ever, included. The 12 to 15 brands reported on each year are representative of about 80 to 85 percent of all the TV sets produced in the United States.

Omission of a particular brand should not, of course, be construed to imply an unfavorable opinion of the make; it is quite possible that some makes not tested would be comparable in performance to some which were tested and given *A-Recommended* ratings. On the other hand, the wise purchaser will often do well to confine his choice to one of the brands tested and found satisfactory, unless he is in a financial position to take a chance, or knows from the experience of neighbors or friends with a given set that no great risk is involved in respect to poor performance or need for too frequent servicing.

CR occasionally receives requests for information on television receivers which are being

offered at unusually low prices. A recent letter, for example, described a new 21-inch receiver costing \$77. The manufacturer's name and the model number of the receiver were not known. A consumer would hardly ever be well advised to buy such a "bargain" receiver. A TV set offered at such an exceptionally low price is pretty sure to be a skimped model using under-rated parts, the minimum of needed tubes and circuits, and a low-quality picture tube, or perhaps a picture tube which has been salvaged from a used set and "reconditioned." A number of circuit details are easily cheapened or omitted and will let the purchaser in for trouble later when the time comes for servicing. Quite likely there will be no guarantee either on tubes or parts. It will very often happen that the substandard set will be of a type and grade that servicemen will simply refuse to repair because of its poor design and because they realize that their customer will be dissatisfied with results of repair or adjustment, and will be back with further troubles in a short time. In such cases, the blame should not be placed upon the serviceman but upon the choice of the receiver.

In general, any set which is offered far below the customary price should not be bought unless

you have a definite knowledge of *why* the price is so far below what is usual. (For example, the set may be damaged or marred in some way which impairs its saleability without affecting its usefulness; or it may be a year or more out of date.)

Servicing, itself, is a major consideration in deciding upon the purchase of any receiver. As is true with any electrical appliance, a *B-Intermediate* TV set may be a more desirable purchase than a set which received an *A-Recommended* rating, if good and reliable service is available for the first set and not for the second one. A consumer is well advised to purchase his receiver only from a reputable dealer who is known to stand behind the merchandise he sells.

Consumers must remember that all makes of television receivers will require a certain amount of servicing. One should not expect any of the CR recommended makes to go on indefinitely without attention by a serviceman for replacement of tubes, adjusting circuits that have gone out of alignment, etc.

In large cities there are many servicemen who do not hesitate to gyp the customer in the most outrageous fashion; they will charge as much as the traffic can possibly be made to bear for each job. They never expect to see you again, and their only fear is that if they push you too far, you may set the law officials of the city on their trail; that has happened in a few cases, but the risk is very small if the crooked serviceman is careful to cover his tracks reasonably well.

On the other hand, in a small community, the serviceman has to live among the people for whom he works, and he is likely to take a direct interest in serving you promptly, efficiently, and without the outrageous overcharges which characterize much big-city servicing. If you are a resident of a city and have had trouble with servicing, better take your work to someone whom neighbors and friends have found satisfactory, or, if necessary, patronize a serviceman in a suburban town near by.

A. Recommended

Motorola, Model 21T26CH (Motorola, Inc., Chicago) \$190.

A satisfactory receiver with very good picture quality and good audio quality.

Description: A table-model receiver employing Motorola's best chassis. 16 tubes plus 3 rectifiers and a 21-in. aluminized picture tube. Cabinet constructed of thin sheet metal. Tuning controls on front, at right of picture tube.

Performance: The picture was very clear, steady, and of ample brightness. Sensitivity, satisfactory. Ability

to reject external interference, good. Radiation from this receiver was desirably low. Operation at reduced line voltage, satisfactory. Quality of sound output from 5-in. speaker, good, for a table model (estimated acoustical range, 100 to 5500 cycles), with good tonal balance and comparatively low distortion.

Other models: Practically all Motorola TV receivers in 21- or 24-in. table, consolette, and console models and ranging in price from \$190 to \$435 use a similar (the 5-Star) chassis. 2

B. Intermediate

General Electric Portable, Model 14T009 (General Electric Co., Syracuse) \$119.

A receiver that was very satisfactory in performance, with good picture quality, and reasonably good audio quality, considering its small size.

Description: A small lightweight receiver employing 12 tubes plus 3 rectifiers and a 14-in. picture tube. Cabinet of thin sheet metal (an aid to portability). Tuning controls are on the side of the cabinet, and there is a handle on top for ease in carrying. Modern manufacturing techniques, such as printed circuits and dip-soldering, were employed in this set. Not strictly a portable receiver, as advertised, since it must be plugged into 110-120 volt power lines for operation.

Performance: The picture, while small by comparison with a 21-in. receiver, was clear, steady, and of ample brightness. Ability to receive a clear picture in fringe areas (sensitivity), satisfactory. Ability to reject external interference, very good. Radiation originating within receiver which, if not properly shielded, allows it to function as a low-powered transmitter, was desirably low. Operation at reduced line voltage was satisfactory. Quality of sound output from 4-in. speaker, satisfactory (estimated acoustical range, 200 to 5000 cycles). Audio power, ample. ¶Used series-string tube filament supply; would otherwise be *A-Recommended*.

Other models: 14T010 (\$130) has a clock-timer included; 14T008 (\$120) has different cabinet finish; 14T007 (\$100) without handle or clock. 1

Silvertone, Cat. No. 6116 (Sears, Roebuck & Co., Chicago) \$175, plus shipping charges.

An average receiver in most respects.

Description: A table-model receiver employing Sears' de luxe chassis. 14 tubes plus 3 rectifiers and a 21-in. aluminized picture tube. Cabinet constructed of thin sheet metal. Tuning controls on right side of cabinet.

Performance: The picture was clear, steady, and of ample brightness. Sensitivity (ability to receive a clear picture in fringe areas), satisfactory. Ability to reject external interference, satisfactory. Radiation from receiver, desirably low. Operation at reduced line voltage, satisfactory. Quality of sound output from 5-in. speaker, satisfactory for a table model (estimated acoustical range, 160 to 6500 cycles). Audio power, ample; audio distortion at low frequencies, somewhat high.

Other models: Chassis 456.38404 was employed in re-

ceiver tested. A similar chassis is used in several *Silvertone* receivers including 6114 (\$165), 6115 (\$195), and 6117 (\$205); prices do not include transportation. **I**

Crosley Berkwood, Model J-21 TKMF (Crosley Div. of Avco Mfg. Co., Cincinnati) \$200.

A satisfactory receiver, with very good picture quality.

Description: A table-model receiver employing Crosley's *Custom V* (first grade) chassis. 15 tubes plus 2 rectifiers and a 21-in. aluminized picture tube. Cabinet of thin wood construction. Tuning controls on right side of cabinet.

Performance: The picture was very clear, steady, and of ample brightness. Sensitivity, satisfactory. Ability to reject external interference, satisfactory (slightly more subject to interference at the set's intermediate frequency than most sets tested). Radiation from receiver, desirably low. Operation at reduced line voltage, satisfactory. Quality of sound output from 5-in. speaker, satisfactory for a table model (estimated acoustical range, 160 to 7000 cycles). Audio power, ample. Servicemen and owners who have need to remove the back of the cabinet should note that one side of the power line is connected directly to the chassis and thus a severe shock hazard may be present. ¶Used series-string filament supply; would otherwise be *A*. Recommended.

Other models using the same chassis are: table—*Fernwood* (\$210); consolettes—*Linwood* (\$215), *Maywood* (\$225); consoles—*Ridgewood* (\$250), *Norwood* (\$260), *Larkswood* (\$290), *Trentwood* (\$360), *Eastwood* (\$370). **2**

Westinghouse, Model H-934T21 (Westinghouse Electric Corp., Metuchen, N.J.) \$200.

An average receiver. Picture quality was not quite as good as with some other receivers tested.

Description: A table-model receiver employing Westinghouse's middle-grade chassis. 15 tubes plus 3 rectifiers and a 21-in. aluminized self-focusing picture tube. Cabinet constructed of thin sheet metal. Tuning controls on front, above picture tube.

Performance: The picture was quite clear, steady, and of ample brightness, but resolution was not as good as on some other receivers, because of "line pairing"*. Sensitivity, satisfactory. Ability to reject external interference, very good. Radiation from receiver, desirably low. Operation at reduced line voltage, satisfactory. Quality of sound output from 5-in. speaker, satisfactory (estimated acoustical range, 120 to 5500 cycles), with good balance between low and high tones, but there was excessive distortion at the lower frequencies. Audio power, good. Servicemen and those owners who have need to remove the back of the cabinet should note that some components on chassis are connected to one side of the power line.

Other models: Chassis V 2342 is also used in 21-in. models: table—935T21 (\$210); consolettes—938K21 (\$250), 939K21 (\$260); consoles—941K21 (\$280), 942K21 (\$280); also in 24-in. models: table—950T24 (\$240), 951T24 (\$250); consoles—956K24 (\$320), 955K24 (\$320), 954K24 (\$300). **2**

* * *

A more complete report on the 1956 model TV receivers with *A* and *B* listings of 9 brands appeared in the December 1955 monthly BULLETIN. The sets listed below are those that were reported more fully and rated in the December BULLETIN.

A. Recommended

Admiral C23B2N; DuMont 350/351-A-1; Magnavox MV 13ILC; Philco 22D4030.

B. Intermediate

General Electric 21T042; Hoffman 21W190U2; RCA Victor 21T6083; Zenith T-2222B; Emerson 1106.

*The picture you see on the screen is actually composed of two separate pictures, each made up by about 240 horizontal varying-brightness lines. If interlace is good, the horizontal lines composing one picture fall half way between the lines composing the other picture; if interlace is poor, the lines approach or merge, known as "line pairing," and picture detail is reduced.

Heed that Faint Shock, and Save a Life

Always test out and have repaired at once any equipment that has given a warning of its unsafe electrical condition by causing a non-fatal shock. Remember that electricity frequently kills without warning and that when a warning is given, it is a piece of good fortune which it is almost criminal to disregard. One must never assume

that because the warning shock is non-fatal the next shock will also not be lethal. Experience within the past few years has shown beyond all doubt that this assumption is wrong.

The foregoing advice is thoroughly sound: it is based on an item in a technical journal published by the U.S. Coast Guard.

Specifications

Taxable horsepower: 46.21

Taxable weight: 3535 lb.

Engine

8 cylinders in "V" arrangement

Piston displacement: 312 cu. in.

Brake horsepower (rated): 210 at 4600 rpm. (215 or 225, with Merc-O-Matic transmission)

Compression ratio: 8 to 1 (8.4 or 9 to 1, with Merc-O-Matic; Premium gasoline is recommended by mfr. for 9 to 1 ratio engine)

Oil filter: full-flow type

Cooling system capacity including heater: 20 qt.

Chassis

Wheelbase: 119 in. (3-1/2 in. longer than Ford)

Over-all length: 206-1/2 in. (8 in. longer than Ford)

Width: 76.4 in.

Tires: 7.10 x 15 (overloaded)

Brake factor: 45

Minimum road clearance: 6.6 in.

Turning diameter: 43.2 ft.

Steering wheel turns (full right to full left): 5

Other details

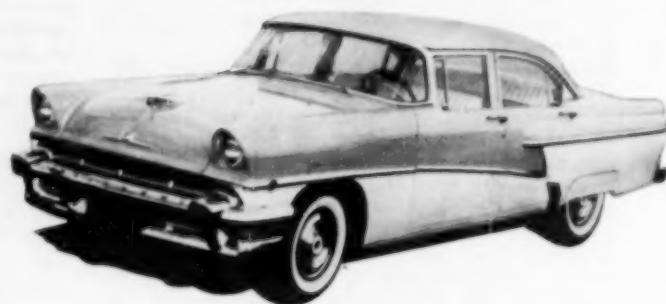
Battery: 12-volt 55-amp.-hr.

Gasoline tank: 18 gal.

Windshield wipers: vacuum

Curb weight of car tested: 3890 lb.

Mercury Monterey



Prices

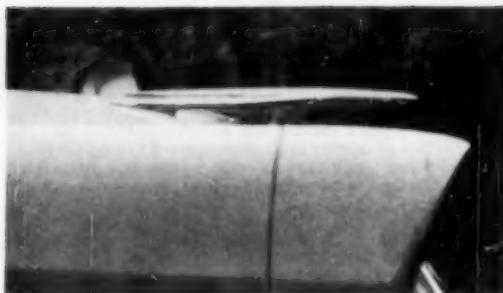
Factory-suggested retail price (4-door sedan)	\$2292
*Federal tax, delivery, and freight (New York)	267
*Preparation and conditioning	125
Delivered price	\$2684

Accessories and extras (factory installed)

"Merc-O-Matic" transmission	\$189.45
Radio	96.30
Heater and defroster	80.70
Electric clock (which is standard equipment on Monterey and Montclair)	15.10
Padded instrument panel and visors	18.30
Foam-rubber cushions (standard on Montclair)	21.50
Power brakes	37.70
Power-actuated seats	64.50
Power steering	80.70
Tinted glass	32.30
Oil-bath air cleaner	8.95
Chrome wheel covers	12.90
Turn signals	12.90
Back-up lights	8.10

*Not factory-suggested charges.

The 1956 *Mercury* or the Big "M," as it is being extensively advertised, is not as big as the advertising implies. Available engines are rated at 225, 215, or 210 hp. or 23, 13, or 8 rated horsepower more than the *Ford V-8 Fairlane*. The car weighs about 150 pounds more and is about 8 inches longer (certainly no advantage in these days of congested traffic and critical parking problems). The headroom in the rear is insufficient, actually less than that available in the *Ford*, while the *Mercury's* other interior dimensions were approximately the same as the *Ford's*. The *Mercury* is also advertised as having "new advances in Safety-Engineering for extra protection of driver and passengers." Apparently the safety engineers gave no thought to the luckless pedestrian who may be unfortunate to be hit by a Big "M," or a passenger in a car struck on the side, for the shape of the hood ornament is about the worst that could be devised, from the safety standpoint. Why should a manufacturer wish to risk anyone's life for the pleasure of adding a lance, spear, or knife blade



Dangerous hood ornament and sharp-edged lamp hood.



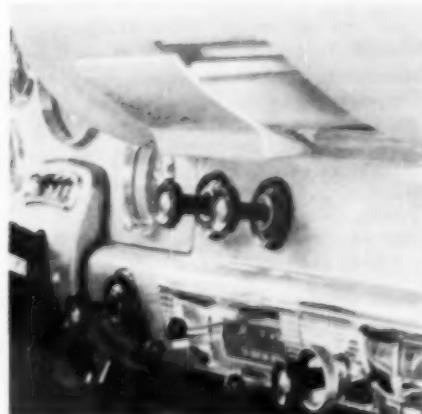
to the front end of a fast-moving automobile? Such weapons are certainly not needed as a means for lifting the hood. Safety of passengers in the car seems also to have been lost sight of, for the large projecting coat hanger hooks near the rear-seat passengers could gravely gash passengers' heads or fracture the skull in the event of a sudden stop or crash or side-on collision.

Sharp edges on the trim are in evidence and not at all what one would hope to find on a medium-to-high-priced car. The value of the safety door locks has been greatly diminished by locating the door handles where they can be opened by impact or accidental contact with the passenger's knee. While this faulty position can be corrected by the dealer by changing the position of the handles on their shafts, so that they point downward (as in the *Plymouth*) or upward instead of toward the front of the car, very few people will realize the importance of directing the dealer to make the change. Steering wheel spokes partially obscure the trans-



Illustration showing how the door could be accidentally opened by contact of the knee with the handle.

Coal hanger
in rear seating space.
Sharp edges and corners
in this location
could be a hazard
to the passengers.



The Mercury does not have a sharp-edged ash tray protruding from center of padded dash, as does the Ford (shown at the left).



Sharp edges of
chrome on door.

mission indicator quadrant, and the P R N, Dr and Lo letters were small and hard to read (about 3/16 inch high).

On the credit side, the padded instrument panel, available at extra cost, is good, and better than that of the *Ford* in that it does not have a sharp-edged ash tray projecting from its center. (See picture on page 13.) The instrument panel is well arranged, with a large fan-shaped easily-read speedometer. One feature deserves special commendation: "gauges" (pressure gauge and ammeter) are used instead of the undesirable signal lights for indicating oil pressure and battery charge that other manufacturers have adopted.

This car had good riding qualities although not significantly better than the *Ford*. It behaved well on turns. The engine had more than enough power, and the *Merc-O-Matic* transmission was smooth in operation. Engine braking was good in Lo, but in Dr was not effective until the car speed dropped below about 25 m.p.h. The left front door was poorly fitted, permitting rain to enter the car.

A- (Tentative)

Mercury Monterey Merc-O-Matic. Factory list price including federal excise tax plus freight and dealer's preparation and conditioning charge, \$2873.

Considered a good car but not sufficiently better than the *Ford Fairlane* to warrant its approximately \$375 higher price. However, last year's and this year's *Mercurys* have been selling at substantial discounts from list, and if a very good discount can be obtained by inquiry of various dealers in your locality, this car is certainly worth consideration—may even be a better buy than *Ford*, *Chevrolet*, or *Plymouth*.

CR's findings on road tests

Gasoline mileage under test conditions: at a constant speed of 50 m.p.h., 18.3 m.p.g.

Acceleration times from 0 to 30 m.p.h., 3.8 sec.; from 0 to 60 m.p.h., 11.8 sec.; from 20 to 50 m.p.h., 7.4 sec.; from 40 to 60 m.p.h., 6.7 sec. The last figure was about the same as for the *Ford Fairlane*; the first three were somewhat better (faster) on the *Mercury Monterey Merc-O-Matic*.

Speedometer was about 6 m.p.h. fast (read 56) at an actual speed of 50 m.p.h.

Odometer was also "fast" by about 4%.

Ford 6 Customline

Most buyers will probably prefer the V-8

The only differences between the *Ford 6* and the *Ford V-8's* are in the engines and the price, which is about \$100 lower for the 6-cylinder model. *Ford* offers three engines this year: the 6-cylinder, rated at 137 hp., a V-8 rated at 173 hp. (176 with *Fordomatic*) used on the *Mainline* and *Customline* models; a V-8 200 hp. (202 hp. with *Fordomatic*) used on *Fairlane* and station wagon models only. The 137 hp. 6-cylinder engine was judged to have ample power and acceleration for most drivers; from a safety standpoint, its power would seem to be well matched

Prices

Factory-suggested retail price (4-door sedan)	\$1785
Federal tax, delivery, and freight (New York)	214
Preparation and conditioning	125
Delivered price	\$2124

Accessories and extras

Same as *Ford Fairlane V-8* (see December 1955 Bulletin)

Ford Customline 6

Taxable horsepower: 31.54
Taxable weight: 3147 lb.

Engine

6 cylinders in line, overhead valves
Piston displacement: 223 cu. in.
Brake horsepower (rated): 137 at 4200 rpm.
Compression ratio: 8 to 1
Oil filter: full-flow type
Cooling system capacity including heater:
15-1/2 qt.

Chassis

Wheelbase: 115.5 in.
Over-all length: 198.5 in.
Width: 75.9 in.
Tires: 6.70 x 15 (overloaded)
Brake factor: 46
Minimum road clearance: 6.5 in.
Turning diameter: 41 ft.
Steering wheel turns (full right to full left):
4-3/4

Other details

Battery: 12-volt 55-amp.-hr.
Gasoline tank: 17.5 gal.
Windshield wipers: vacuum
Curb weight of car tested: 3455 lb.

to a car of its weight. The 6-cylinder engine was somewhat noisier than the 202 hp. V-8 engine on the *Fairlane* reported in the December issue. In the gasoline mileage tests under controlled conditions, the 6 showed better gasoline economy. The brakes on this car (and the *Fairlane*) required above-average pressure to apply. For other comments, see the report on the *Fairlane V-8* in the December 1955 issue.

A- (Tentative)

Ford Customline 6 Fordomatic. Factory list price plus freight and dealer's preparation and conditioning charge was about \$2300.

The choice between the 6-cylinder Customline and the *Fairlane V-8* on the basis of present information would seem to be one of cost and personal preference. (The Customline V-8 173 hp. has not yet been tested.) For many, the *Fairlane V-8* with its 63 extra horsepower and somewhat quieter engine will be worth the extra \$200 it costs over the Customline 6. However, the V-8 may be more marketable later on in view of the fact that 90% of the buyers are choosing V-8's.

CR's findings on road tests

Gasoline mileage under test conditions: at a constant speed of 50 m.p.h., 19.6 m.p.g.—very good. (Over-all miles per gallon for the 1500 miles this car was driven by CR was 16.1.)

Acceleration times from 0 to 30 m.p.h., 5.5 sec.; from 0 to 60 m.p.h., 18.1 sec.; from 20 to 50 m.p.h., 11.5 sec.; from 40 to 60 m.p.h., 9.7 sec.; all considered adequate.

Speedometer read about 4% too high at 50 m.p.h.

Odometer was also "fast" by 2%.

Winter Driving Facts

THE National Safety Council issues a valuable booklet entitled *It's Your Responsibility*, for passenger car drivers, dealing with basic winter driving rules. The information was carefully worked out by The Committee on Winter Driving Hazards, made up of automotive engineers, road engineers of the National Safety Council, and research people in the field of highways, state motor vehicle department experts, safety experts for tire and oil companies, traffic and highway engineers.

This 15-page booklet brings to the reader's attention many important and interesting facts about the hazards of braking and steering on ice and snow, and helps the driver to operate on the side of safety under the varying difficult conditions of winter driving. It brings out the importance of reinforced tire chains as contrasted with the ordinary or regular tire chains. (In the reinforced chains, each link of the chain is reinforced by projecting cleats which improve forward traction but are particularly effective in adding protection against sidewise skidding.)

The six basic principles of winter driving as set forth by the National Safety Council's Committee are:

1. Make it a special point to drive with care in winter; don't blame the weather—it's your responsibility.
2. Be sure your tires and tire chains are in

good condition, and use the reinforced type of tire chain just mentioned.

3. Keep not only the windshield but also the windows clear of snow and ice so that you may see the direction from which danger may come, and be sure your wiper blades work evenly and don't streak.

4. Get the feel of the road by trying your brakes when you are going slow and out of traffic.

5. Keep well behind the vehicle ahead, remembering the long distance it takes to stop on snow and ice.

6. Learn to work your brakes intermittently on icy roads—a fast up-and-down pumping rather than a heavy, steady pressure on the brake pedal.

A single copy of the booklet may be obtained without charge by printing your name and address on a postcard and sending it to Consumers' Research, Inc., Washington, N.J., which will send the cards on to the National Safety Council. Schools, factories, and other institutions interested in obtaining a number of copies may write direct to the Secretary of the Committee on Winter Driving Hazards, National Safety Council, 425 N. Michigan Ave., Chicago 11, for information regarding prices on quantity orders.

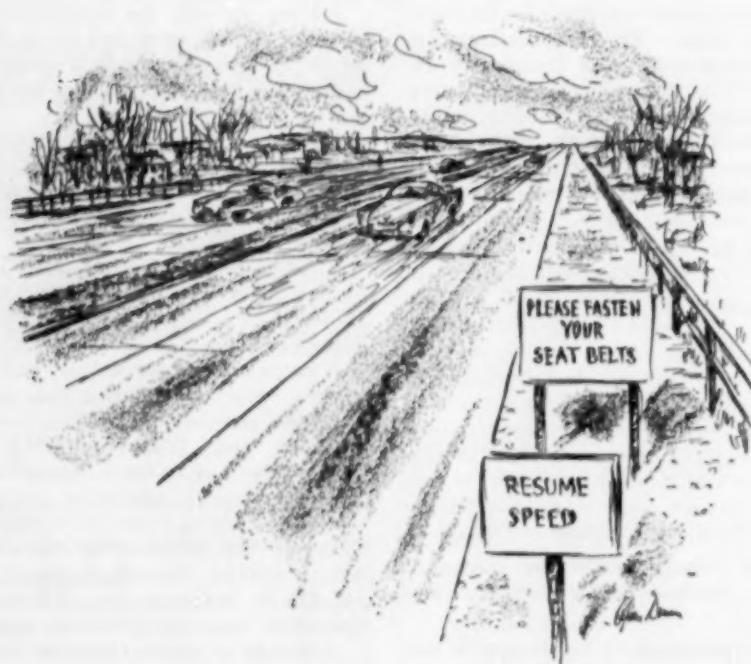
A booklet of similar character entitled *It's Up to You* deals with the special winter driving problems of truck drivers and may be obtained on the same basis.

Are the 1956 Cars Safer?

In the advertising, yes—but in practice they're as bad as ever, and in some ways getting worse

IN spite of the automobile manufacturers' latest advertising hullabaloo, the design of cars from a safety standpoint has a long, long way to go before the number of accidents and deaths due to characteristics of cars themselves is likely to show an appreciable reduction. When it is realized that over 38,000 Americans were killed by automobiles last year (with 100,000 persons totally disabled), which is more than all the soldiers killed in the Korean war in three years, it becomes very evident that if this senseless slaughter is to be reduced effectively, many radical changes in automobile design will have to be made. These changes must go far beyond padded instrument panels and visors, "dished" steering wheels, improved door locks, and safety belts.

The latest design changes seem for the most part to be merely token attempts to appease the numerous and influential critics of current automobile design. CR does not mean to imply that the changes that have already been made are not of some value, but if manufacturers really believe the present halting steps to be desirable and effective, they should surely include the improvements on all the new cars as standard equipment and not as optional extras, which only those who care to spend extra money will buy. Obviously the added safety can be provided without increasing the price of the cars, by omitting some of the useless chrome, the dangerous hood ornaments, and the begadeted bumpers loaded with chrome-plated knobs and bumps found on most of today's cars.



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The New Yorker Magazine, Inc.

One trend which is decidedly against the interest of safety is the popularization of the so-called hardtop car, which, having no center door post, is much less safe against the effects of collision and overturning than the conventional 6-passenger model. It seems to CR of little value to pad the instrument panel without at the same time doing away with all the sharp edges and projections that are in front of and beside the driver and his passengers, the projecting heater and radio control knobs, sharp-edged ash trays and glove compartment doors which are open or can spring open. All of these can be rendered relatively safe by recessing or by redesigning in other ways. Even conventional arm rests are a cause of grave injury in accidents.

Consumers' Research is by no means alone in pointing out gross deficiencies in the design of the modern automobile. Speakers at a medical society meeting in California in October condemned the needless hazards car manufacturers have built into their product. They brought out the fact that when a car hits a pedestrian, the unnecessary decorative gadgets near the front of the car maim and kill. Reference was made to masticating grilles, door handles that tear away flesh, knife-edge eyebrows over headlights, and spear-like hood ornaments, bumpers, and the bulging projections on bumpers.

Dr. C. Hunter Shelden of Pasadena, writing in the Journal of the American Medical Association for November 5, 1955, has said that injuries to passengers occur "primarily as a result of faulty interior design of the automobile. . . . there is almost no feature of the interior design of the car that provides for safety. The doors, seats, cushions, knobs, steering wheel, and even the overhead structure are so poorly constructed from the safety standpoint that it is surprising anyone escapes from an automobile accident without serious injury. The elimination of the mechanically hazardous features of interior construction would prevent approximately 75% of the fatalities, or 28,500 deaths each year. Serious injuries [in "jalopy" races] are rare, because the potential injury-producing factors present in the average private automobile have been eliminated. . . . seats welded or very rigidly fixed to the frame, all projecting knobs or handles removed, and roll bars [to protect against crushing in of the top], as well as rigid interior supports, installed."

Dr. Shelden notes that poor design of seats is responsible for the very common "whiplash" injuries which are the most disabling of all non-fatal automobile injuries (these occur when a car is struck from behind). They involve dam-

THE MILWAUKEE JOURNAL
Tuesday, Dec. 28, 1954

Death Caused by Ornament

Vehicle Strikes Man; Piece From Hood Pierces His Back

A hood ornament inflicted fatal injury to a Milwaukee businessman who was struck by a car Monday night.

He was [redacted]

[redacted] et. He operated a wholesale grocery business.

[redacted] was struck by an automobile

at 6 p.m. as he walked along highway 52 about three-quarters of a mile south of the Milwaukee-Racine county line.

county coroner, said [redacted]

suffered a broken leg and facial scratches which would not have proved fatal. He was killed by a puncture wound from the sharp pointed hood ornament which penetrated his back three to four inches.

PHILADELPHIA BULLETIN
September 17, 1954

Radiator Eagle Dies; Woman Hospitalized

Columbus, O., Sept. 17—(UPI)—A low-flying bald eagle struck a woman on the head here yesterday, sending her to the hospital for treatment of an ear cut.

The eagle was a radiator ornament, launched by a car driver to avoid a pedestrian. The bird struck while in flight.

THE DAYTON DAILY NEWS
Sept. 29, 1955

In "serious" condition at St. Elizabeth hospital is [redacted] eight-year-old daughter of [redacted]

Hospital aides said the car's hood ornament penetrated the girl's skull which sustained fractures.

LETHAL ORNAMENT
This late model car, when it crashed the unoffending bus, had a spear-like ornament on its radiator front. The ornament remained intact. It punched a two-inch hole in the bus side.

"Suppose," the laboratory director said, "that the gadget hit a pedestrian instead of a sheet metal side. Why is it necessary to fix spears and lances to the front of cars?"

BOSTON
SUNDAY HERALD
November 15, 1953

age to the cervical spine, and neck fractures are frequent (one to three years' disability are common with these injuries).

A British physician points out that one manufacturer's practice of making tail lights much larger than is normal is contrary to good safety practices. For a person with a certain type of colorblindness or one unwisely wearing anti-glare goggles at night, such lights are hard to distinguish from oncoming headlights. The present trend toward elongated, vertical-bar tail lights is a good one, as it adds the distinction of shape to that of color in helping the driver to distinguish tail lights from headlights under extreme driving conditions of heavy rain, snow, or sleet.

Ford has moved its hood ornament back about two inches, possibly to meet to some degree CR's expressed objections to sharp protruding hood ornaments that menace pedestrians in accidents (see April 1954 BULLETIN). The new design does not eliminate the danger, though it may

diminish it somewhat. The projecting prong, still a menace to pedestrians who may be hit by a car, is actually a little longer than it was in last year's *Ford*. Ford's public relations people apparently do not consider the hood ornament important from the hazard standpoint, for, in one of their news releases on the new cars, the new ornament is treated simply as a matter of styling.

The solution to the problem of the hood ornament is simply to build the car without one. This year's *Chrysler Imperial* has no projecting ornament, and it is hard to see what possible disadvantage there could be in this omission. Means for lifting of the hood can be provided in much simpler ways—ways that will be entirely safe and present no risk of impaling a luckless child or pedestrian.

Lt. Colonel John Paul Stapp of the Air Force, famous for his work in making jet planes safer for pilots, has also made a car crash study program as a result of a survey which showed that in 1954, while the Air Force lost some 700 men in plane crashes, 628 died in auto accidents. Colonel Stapp, according to a report in Time magazine, thinks safety belts and safety locks an absolute necessity and holds that dashboards should be padded and moved forward. Among other points, he thinks rear window shelves should be removed (objects on rear window shelves are catapulted forward into passengers' heads during crashes) and power brakes should be operated by hand (an eye-hand reaction is quicker than the eye-foot reaction).

A New Hampshire researcher, Andrew J. White, noted that in a test crash at more than 40 miles an hour a seat belt prevented him from bracing himself against the impact, with the result that a jackknife action occurred at his waist, allowing his head and the upper part of his body to go forward and downward onto the dashboard. Without a crash panel on the board (and crash helmet on his head), serious injury to the head could result in such a case. Some hold that belts are of little value and that a safety harness is the proper method. On the other hand, a recent United Press report from Waterloo, Iowa, credited automobile safety belts with saving three persons from serious injury in two days. A husband and wife were uninjured when their car turned over, and another motorist was the only one uninjured out of several involved in a three-car collision. All three were fortunate in having used their safety belts. Educating the public to use safety belts or harness is likely to be difficult, for several reasons. They are a bother to put on, and are likely to add to the user's discomfort in hot

weather. Women, in particular, when wearing expensive fur coats or dresses which would be damaged by contact with a safety belt, are likely to be opposed to using the device.

Since it may be vitally important to get *out of* a safety belt or harness quickly in some kinds of accidents, the purchaser should be sure to determine that the belt or harness can be quickly and easily unlatched, *with use of either hand*, by the person who will use the belt (the latch position depends to some extent upon the waist measure of the passenger or driver).

Car manufacturers still vie with one another in offering longer and more powerful cars, following the trend of the last decade. (A maker of one of the low-priced cars has taken pride in the fact that his car is the largest in its price class.) Even the little *Nash Rambler* is longer, though it is still 18 inches shorter than the average American car. Anyone who does a great deal of city driving should give a good deal of thought to the desirability of having a short rather than a long car. The average parking space is said to be about 22 feet long. It is obvious that any of the longer cars will call for expert handling and a minimum of passing traffic, to be safely parked in such a space. The trend to ever-increased horsepower is strongly objected to by many highway safety men and engineers, who feel it is primarily a sales and advertising gimmick. The American Automobile Association has publicly urged the automobile manufacturers to reduce the power and speed of their cars. Engine specialists also note that with a 200-horsepower engine under the hood, the average load is very low for the engine's capacity; thus engine and cooling water temperatures are unduly low most of the time, causing poor combustion and great waste of fuel. These conditions favor engine deposit and general spark plug fouling and, thus indirectly increase the octane number requirements of the engine. The consumer will find, however, that most manufacturers have upped the horsepower of their engines, in complete disregard of what the situation really calls for in the interest of safety, fuel and tire economy, and engine maintenance.

Andrew J. White's Motor Vehicle Research notes that safety glass has not changed materially for a number of years, and that, when it breaks, this glass becomes thousands of razor-like splinters which tear and cut the faces of persons who are thrown into the glass in accidents.

Referring further to the glass in cars, MVR's release comments: ". . . we now have a one-piece windshield of a curved nature that distorts all objects in front of us, including the road. At

night we are forced to look at double images and almost come to the conclusion that two cars are coming toward us rather than one."

Images of the dashboard reflected on the windshield are disturbing and confuse drivers' vision. There is not the slightest reason why the dash area below the windshield should not be given a dull matte surface so that there will be no bright reflections from it into the windshield and thence to the driver's eyes.

All in all, the car manufacturers have a lot they can work on, if they would really like to build safe and sane cars. The great majority of American consumers, who wish to incur no needless risks of death and injury for themselves

and their families, will welcome automobiles which do not harbor a host of hidden dangers in the form of head crackers, rib smashers, face lacerators, and bone breakers to their occupants and to others on the road.

Detroit had better realize that, if its products continue to be the cause of the death of 38,000 customers and potential customers a year, the more populous states are pretty sure to step in and put car makers under far more stringent restrictions than now apply. There is already talk of maximum-horsepower restrictions that will go far toward taming the teen-age hot rodders and others who drive recklessly for the sheer fun of speed and the taking of risks.

Corrections and Emendations to Consumers' Research

Annual Cumulative Bulletin (ACB) and Monthly Bulletins

The Baby's Diapers As was noted, gauze diapers in
Page 18-21
Mar. '55 Bulletin

as a group, partly because of their relatively low breaking strength, which is one measure of durability. Manufacturers have pointed out, however, that the breaking strength of a single layer of fabric means less in the case of gauze diapers than other kinds since gauze diapers customarily have two layers of material woven together at intervals. When judged on a two-layer basis, some gauze diapers have as high a tensile strength as a single layer of other diaper fabric, birdseye, for example. When strength was judged on the basis of two layers of fabric, gauze diapers Chix, Curity, Honeysuckle Best Quality 29-112, Spiegel Best Quality 28-2826, and Wards Supreme Quality 31-616 would receive an A-Recommended rating. All the other gauze diapers tested would receive a B-Intermediate rating.

**High-Priced
35 mm. Cameras**
Page 21
June '55 Bulletin

Leica If, IIIf, IIIIf with Taylor-Hobson-Cooke f/2 lenses. Change listing from C. Not Recommended to B. Intermediate. A New York camera store purchased these T-H-C surplus lenses and adapted them with screw-in mounts for Leica cameras. For a time, some of the mounts were not machined to the rigid tolerances used by Leica and were not fitted with the necessary optical precision to the camera bodies on which they were sold. The fitting is now being done by another shop, and three similar

T-H-C f/2 lenses supplied to CR with a Leica IIIIf were found to be correctly mounted.

Minolta II. Change listing from C. Not Recommended to B. Intermediate. Workmanship of current models was found to be much better than that of the original sample examined.

**Garbage Disposal
Device, Outdoor**
Page 24
June '55 Bulletin

The Bard-Matic device is now distributed by the Bardmatic Corp., Box 266, Muskegon, Mich., and sells for \$39.95. When CR purchased its sample in 1954, Stevens-McIntosh Corp. was the distributor and the price was \$29.95, as reported in the article.

**Portable Cooler
Chests**
Page 7, Col. 2
July '55 Bulletin
ACB '55-'56

Change model number of the Skotch Kooler reported on (the \$7.95 model) from No. 101 to 404. (No. 101 is the smaller Skotch Kaddy, at \$3.95, which was not included in CR's test.)

Tape Recorders
Page 13, Col. 2
Aug. '55 Bulletin
and
Page 191, Col. 1
ACB '55-'56

The price of the Crestwood Model 304 tape recorder was incorrectly given as \$199.50. The correct price of that model is \$229.50.

**Twin-Lens Reflex
Cameras**
Page 203
ACB '55-'56

Tower Reflex I. Change listing from C. Not Recommended to B. Intermediate. Quality of lens should have been reported as fair instead of poor.

Water Heaters—Prolonging the Life of Tanks

The cost of heating water

EXCESSIVE water temperature (above 150° to 160°F) is one of the most important factors in shortening the life of hot-water storage tanks. In some cases manufacturers' guarantees are voided if the water temperature has been carried above 160°F. It is best to keep the water supply at a temperature not above 150°, preferably 140°, in order not to shorten unduly the life of tanks, valves, and piping, and besides to avoid the risk of scalding an infant or other person who might be unable to protect himself quickly from water coming from a faucet or shower-head at a dangerously high temperature.

Corrosion of tanks and piping is in many localities a serious problem and adds substantially to the cost of maintaining a home. With the increased popularity of copper piping, it is more important than ever before to take all precautions to reduce electrolytic corrosion to a minimum. Especially where a galvanized tank is used with copper piping, the first safeguard is to use only special unions, called "dielectric" unions, at all points where steel (or aluminum) and copper join in pipes, tanks, fittings, etc. In these unions, non-metallic gaskets separate the metals so that electricity cannot flow through the joints. At a cost of about \$2.50 each, and with only two needed, as a rule (for the inlet and outlet connections), the expenditure is well worth while; in fact, some heater warranties are voided unless dielectric unions are installed where needed. With tanks made of aluminum or aluminum alloy, even slight traces of iron or copper in the water will promote rapid corrosion. Thus copper or corroded galvanized steel piping in the run from the tank to the water main is likely to bring about rapid deterioration of an aluminum tank and associated piping; the same is true with a tank made of galvanized steel when copper or brass tubing or piping is used.

Magnesium anodes

A second means of dealing with the corrosion problem, which is satisfactory where conditions are right, is to equip the tank with a magnesium anode, which is a rod of the metal immersed in

the water stored in the tank. This rod "absorbs" the electrochemical action and is itself corroded away; in doing this, it will normally reduce to a considerable extent the corrosion of the tank. Whether or not an anode will be effective will depend upon the nature of the water supply. The analysis of the water should be known to determine if an anode is desirable (unless neighbors using the same water supply have employed the anode method successfully over a period of years). In water containing less than 120 parts per million of dissolved solids, anodes have been found ineffective in protecting galvanized tanks, because of the low conductivity of the water. Except where the water has a high sodium content, usually present as sulfate, chloride, nitrate, or bicarbonate, as it does in a few states (for example, in parts of Texas, California, Wyoming, Colorado, South Dakota), this would correspond to hardness of 7 grains or less, or soft to moderately hard water. Normally, high content of dissolved solids corresponds to a high degree of hardness, but there are a few places where the solids content may be as high as 1600 parts per million, of which one half or even a great deal more will be sodium compounds. Thus the water in Bartlett, Texas, has a hardness of 270 parts per million but has 1200 parts per million of sodium; Bushnell, Illinois, has 408 parts per million of hardness, 1200 ppm. of sodium.

With "glass-lined" (porcelain-enamelled) hot-water tanks, magnesium anodes will furnish protection with softer water (fewer parts per million of solids) because of the much smaller area of bare metal to be protected. On the other hand, with water containing more than 250 ppm. of dissolved solids (corresponding, with the exception noted above, to about 15 grains, which is very hard water), the electrolytic current flow with a galvanized tank will be greater than necessary or desirable. In those circumstances, the expendable anodes are eaten away too rapidly. When the water is extremely hard and contains 500 ppm. or more of solids, an anode is usually not required, as such hard water usually deposits a coating of calcium and magnesium salts on the walls of the tank that protects it from corrosion.

APPROXIMATE COST OF HEATING DOMESTIC SERVICE WATER WITH VARIOUS FUELS

Fuel and Unit of Sale	1 Unit Price \$	2 Cost per Therm (100,000 Btu) \$	3 Monthly Stand- by Cost† \$	4 Cost for Heating Each 100 Gal. of Water†† \$	5 Total Monthly Cost (relative, based on use of 2500 gal.) \$
Electricity, kilowatt-hour	0.01	0.29	Neg.	0.24	6.00
	0.015	0.44	Neg.	0.36	9.00
(3413 Btu/kwhr.)	0.02	0.59	Neg.	0.49	12.00
	0.025	0.73	Neg.	0.61	15.00
	0.03	0.88	Neg.	0.73	18.00
	0.035	1.02	Neg.	0.85	21.00
	0.04	1.17	Neg.	0.97	24.00
Manufactured Gas, 1000 cu. ft. (mcf.)	0.75	0.14	1.03	0.12	4.00
	1.00	0.19	1.37	0.16	5.40
(525 Btu/cu. ft.)	1.25	0.24	1.72	0.20	6.70
	1.50	0.29	2.06	0.24	8.10
	1.75	0.33	2.40	0.28	9.40
	2.00	0.38	2.74	0.32	10.70
Natural Gas, 1000 cu. ft. (mcf.)	0.50	0.05	0.36	0.04	1.40
	0.75	0.075	0.54	0.06	2.00
(1000 Btu/cu. ft.)	1.00	0.10	0.72	0.08	2.70
	1.25	0.125	0.90	0.10	3.40
	1.50	0.15	1.08	0.12	4.10
L-P (Bottled) Gas, gallon	0.10	0.11	0.80	0.09	3.00
	0.15	0.17	1.20	0.14	4.70
(90,000 Btu/gal.)	0.20	0.22	1.60	0.18	6.10
	0.25	0.28	2.00	0.23	7.70
	0.30	0.33	2.40	0.28	9.40
	0.35	0.39	2.80	0.32	10.80
	0.40	0.44	3.20	0.37	12.20
Fuel Oil, gallon	0.12	0.09	1.80	0.07	3.60
	0.14	0.10	2.10	0.08	4.10
(140,000 Btu/gal.)	0.16	0.11	2.40	0.09	4.60
	0.18	0.13	2.70	0.11	5.40
Anthracite, ton	15.00	0.06	2.70	0.05	4.00
	20.00	0.08	3.60	0.06	5.10
(13,000 Btu/lb.)	25.00	0.10	4.50	0.08	6.50

Neg.—Negligible

†—Standby cost is that cost incurred whether or not any hot water is used, and includes costs such as for maintaining a fire, pilot burners, and heat radiation, conduction, and convection losses which serve only to heat the room where the water heater is situated. Losses

are calculated at 24,000 Btu per day for gases; 16 gallon of oil per day for oil; and 12 pounds per day for coal. Total cost for hot water is then the monthly standby figure shown in column 3 above plus the cost of heating the amount of water used.

††—Assuming 100°F temperature rise, such as 50°F to 150°F.

When an anode is installed, it should be of sufficient length to come within two or three inches of the bottom of the tank; otherwise the protection will be incomplete. Anodes, which are not expensive (\$3 to \$8), may have a life as short as two years, and should therefore be inspected every year or so to be sure they have not been eaten away in whole or in part in such a way as to impair the protection of some parts of the tank.

If used with soft water, a magnesium anode may increase the hardness of the water to an appreciable extent; this is unavoidable in the nature of the electrolytic action involved. The anodes should not be used in hot-water heating equipment used for demonstration of commercial appliances or in other places where the storage tank is large and hot water may at times not be drawn off frequently or regularly. The hydrogen gas produced may in some instances be sufficient to cause a dangerous or even disastrous explosion; such a result, however, is considered unlikely in any normal *home* installation.

Some manufacturers of porcelain-enamelled tanks omit provisions for magnesium anodes, claiming they are not necessary in view of the protective lining. However, better informed firms have found that the use of the anodes is warranted in such tanks because of the tendency which was described in the August 1955 BULLETIN for corrosion to concentrate on welds and other spots which happen not to have been protected by the ceramic coating. Practically all porcelain-lined tanks have a few areas where bare metal is exposed to the action of the water, and, of course, in such cases the metal may be eaten through to an ultimate leak, just as though a very large area were unprotected. So far as the consumer is concerned, a tank fails and must be replaced if only one quite small spot is corroded through.

While magnesium anodes help materially in many cases, there are some water conditions where the effect of their use is worse than corrosion. In such cases there may be odor in the water, cloudiness, darkening and discoloration of silverware, and sludge accumulations in the bottom of the tank resulting in loud crackling noises during periods when the water is being heated by gas or oil. Some authorities view the combination of a magnesium anode and a fluoridated city water supply as a possible hazard to health (see "Protecting Hot-Water Tanks Against Corrosion," CR BULLETIN, May 1953, page 30). Because of the possibility of the anode-protected tank being unsatisfactory for some

reason, some manufacturers offer magnesium anodes as optional equipment on even their more costly models. Thus, despite the marked advantage in reducing corrosion in cases where circumstances are right, a check with local plumbers or water authorities, or both, is suggested before deciding upon installation of a magnesium anode. Anodes would not have much advantage with tanks of aluminum alloy and are not necessary for tanks of monel metal.

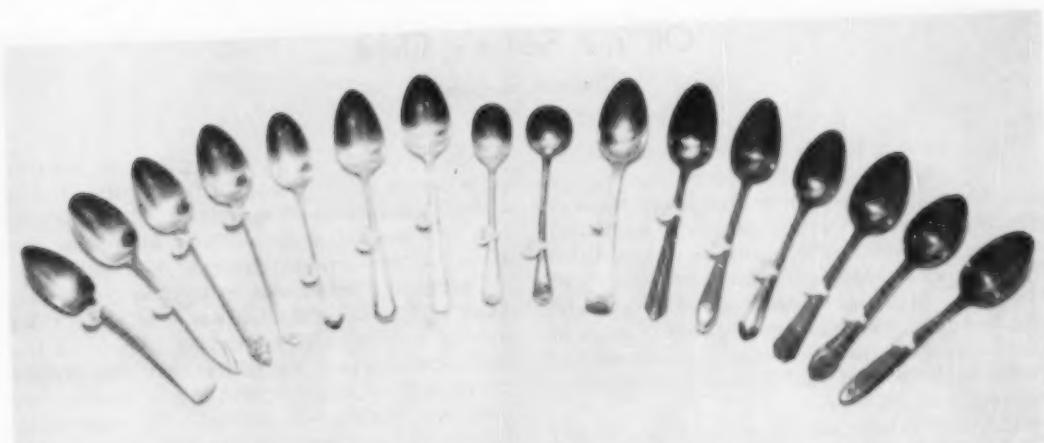
Cost of heating water

Where the local fuel costs are known, a very fair approximation of comparative costs of heating water by gas, electricity, coal, etc., can be obtained from the table on page 21.

According to the American Gas Association, tests of three stock automatic storage-type heaters were made, supplying 50 gallons of hot water a day to a family of five living in a six-room house. Average gas consumption was just under 20 therms a month (equivalent to 2000 cubic feet of natural gas or 3770 cubic feet of a common type of manufactured gas). (A therm is 100,000 Btu.)

The need for care in the selection of a water heater is now greater than before, for three important reasons. (1) The widespread use of automatic clothes washers and dishwashers which demand higher water temperatures, which in turn call for tanks of higher quality and better construction. (2) The use of more hot water for all purposes has made it important to select a water heating unit of adequate size. (3) The increased use of copper piping, which feeds water into galvanized hot-water tanks, has greatly increased the need for care in protection of the tank and piping against corrosion.

Aluminum pipes should not be used for gas or water where the pipe passes through or is in contact with a concrete wall or through a plastered wall. Aluminum pipes should never be used for water when there is even a trace of copper or iron in the water (e.g., from prior contact with copper, or galvanized iron piping that is "upstream" from the aluminum). The same applies to aluminum tanks. It would be safest not to use a galvanized tank at all with copper piping unless previous experience with the local water supply has shown that the combination is safe. In one locality, there were 500 tank failures in 4 years with copper piping, none with galvanized piping in 6 years (Floyd Brown of North Carolina State College, in a bulletin, Corrosion in Piping and Heating Equipment).



The spoons shown above were originally polished at the same time with the silver polish furnished in the *X-pose* kit. The light spoons to the left of the center were treated with the tarnish preventive; the darker ones at the right of center were untreated. All the spoons shown were exposed to air containing small but regular amounts of tarnish-producing gas continuously for a period of four weeks. On all but three of the treated spoons, *X-pose* gave almost 100% protection against discoloration by tarnish, under extreme exposure conditions.

How to Protect Silver from Tarnishing

MOST homes have at least a few articles of silver on display such as a tray, candlestick, cigarette lighter, or a complete service which is used only on rare occasions. Such pieces contribute to beauty in the home if they are kept shiny and free from tarnish.

Silver pieces can be kept bright by cleaning or polishing periodically as the items begin to discolor. This may be as often as once a week, depending upon the amount of tarnish-producing gas (hydrogen sulfide, mostly) present in the air of the home.

A means often used for keeping silver tarnish-free for periods up to several months is to apply a thin film of plastic, lacquer, or wax over the surface of the object; this excludes the gases that are present in the air from contact with the metal. In order to obtain a neat-looking job with lacquer or equivalent transparent film, the film must be applied smoothly and evenly. When such pieces require polishing again, the film will have to be removed completely, which may be a difficult and time-consuming job.

A product is now available, sold under the name of *X-pose*, which includes a silver polish suspended in a liquid, a tarnish preventive paste, and a cloth for wiping and thereafter dusting silver pieces treated with the paste. In tests, the polish as well as the tarnish preventive performed effectively. *X-pose* tarnish preventive can be applied easily and quickly, compared with a lacquer or plastic coating, and can be removed by washing in soap and water. Not recommended for tableware unless each piece is washed before use.



Original *X-pose* kit at \$1.49, is shown above. The kit contains silver polish, tarnish preventive, and cloth for final wiping.

A. Recommended

X-pose (Center Chemical Corp., Cleveland 13) \$1.98 for kit. The paste is estimated by a chemist to be a mixture of a hard natural wax, about 30%; lauryl alcohol, 27%; silicone, 1%; and the remainder fatty matter. The cloth is flannel, impregnated with a mixture of about equal parts of wax and mineral oil.

Off the Editor's Chest

(Continued from page 2)

The consumer has come a long way from the days when *Your Money's Worth* was rightly considered a daring pioneer book in the field of criticizing and evaluating products by brand name. The consumer at that time was regarded by many as someone with the characteristics of Henry L. Mencken's *boobus Americanus*, who was fair game for extravagant claims of magical performance for quite ordinary products sold at prices set very high, and limited only by what the traffic would bear.

The right to criticize commercial products and services freely in unfavorable terms that had been accorded to critics of books, plays, and motion pictures did not extend to commodities, and in 1927 it was considered extremely hazardous and almost revolutionary. Indeed, in the early days of Consumers' Research, on the advice of expert legal counsel, CR's BULLETINS were issued as confidential information to the individual subscriber because it was felt that a certain privileged relationship of professional adviser and his client afforded some protection against libel suits that might be instituted by some of those whose products were found ineffective or misrepresented.

The attitude of the day was epitomized by a New York Times review of *Your Money's Worth*, which concluded, perhaps ironically, "Something tells us that this book is going to be suppressed. It strikes at the very foundations of prosperity, for how can a nation be prosperous if its citizens buy only the things they want?" Another reviewer maintained that ". . .the simple fact of the day and hour seems to be that hard times prevail in countries where trade is on the old-style basis of cautious, quality buying and where the consumer is jolly-well getting his money's worth, whereas in our harum-scarum country, with all its hot-air salesmanship, its waste and commercial bunk and junk, the average citizen and his family are simply reveling in material luxuries, comforts and creature needs . . ." That was in 1927, and many changes, mostly for the better, have taken place in the nearly three decades that followed.

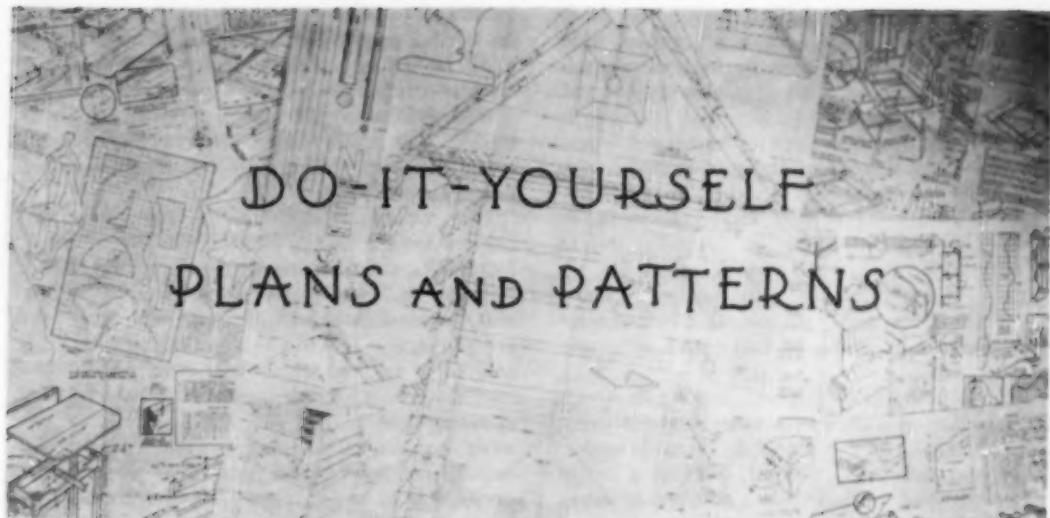
The abundant quantity of products turned out by the American technique of mass production and the subsequent widespread employment of both men and women on the assembly-line have made the American consumer a person to be sought after. There is extensive competition for his favor because, after his essential living

needs are taken care of, he has a fairly sizeable amount (in the aggregate) left over for what is called "discretionary" spending. The standards set by Consumers' Research in evaluating one brand against another have provided the consumer, where he chooses to exercise discrimination, with data to make a sound selection from among a number of competing brands. CR's technical criticisms of products have also brought about a great improvement in the quality and economy of the goods offered. In some fields, improvement of products has been so great that the consumer can choose almost any reputable make without serious risk, and he is no longer the helpless victim of the "blue sky" claims of the reckless admen of the 1927 era.

The interesting point about this improvement in the consumer's position is that it was not accomplished by a militant pressure group exerting influence on politicians in Washington or by governmental action, for the most part. It was achieved on a self-correcting basis as a result of criticism and information supplied to individual consumers that made them more independent of ad-claims and sales talk.

The young student mentioned in our first paragraph said that in the course of his researches he had come across an article that appeared last fall in a popular U.S. magazine, with a circulation of over five million readers, openly critical of certain advertising claims for particular classes of products. In his country, he said, such a thing would be impossible. He quite readily agreed that this alone represented considerable advance in the status of the consumer over his position in 1927, when criticism of even false and misleading advertising was considered highly reprehensible, if not revolutionary.

The consumer in the United States, aided by the technical and scientific work of Consumers' Research, and the efforts of private organizations like the American Medical Association and Better Business Bureaus in exposing dishonest and misleading business and advertising practices, has achieved an economic position unparalleled throughout the world. All this without a pressure group organization! Why should the consumer need a "movement" to help him, when he himself is the dominant factor in making the American economy the outstanding success that it has achieved in competition with every shade of socialist and other totalitarian economies in Europe and Asia.



DO-IT-YOURSELF PLANS AND PATTERNS

A GREAT MANY Americans get much satisfaction from taking things apart and putting them together, building their own furniture and household equipment, and doing a large part of the repairs and maintenance work on their homes. This is an admirable characteristic when carried out within reasonable limits of time and energy and with due regard to safety. Many people have acquired the do-it-yourself habit for practical economic reasons, others as a means of relaxation or as a hobby. Because of the very high cost of skilled labor nowadays, and the disappearance of the handyman, it has become a matter of necessity for many householders to attend to their own repairs and improvements.

The do-it-yourself movement, no longer a mere vogue or craze, is the basis of a substantial industry supplying an estimated 60 million people with plans, materials, and tools at a cost of \$6 billion a year, or an average cost of \$60 to \$100 per year per home workshop owner. It is a definite part of the way of life of millions of small town and suburban householders.

Progressive manufacturers, aware of the trend, soon placed kits, plans, and patterns on the market in increasing numbers. It has been estimated that up to the present time, 5 million patterns have been sold, and more than 3500 do-it-yourself books and brochures sold or given away.

As might be expected, with so many plans and patterns being distributed, there are many which are unsatisfactory. An experienced craftsman or gifted amateur might be able to follow the

If you are a home hobbyist, and about to invest in materials and a pattern to build a piece of furniture or other equipment for your home, reading this article before you start will help you save both time and money. The findings will help you to judge better the type of pattern or plan you can use successfully.

poorly presented or inadequate instructions furnished with some patterns, but the person who is inexpert in this field would experience considerable disappointment and a feeling of frustration in carrying out some of the advertised projects. On the other hand, some plans and patterns are presented in such a clear, concise manner that almost anyone able to follow simple instructions and having proper tools could carry out the operations called for on a given project. In many cases, the cost of tools and materials may be much greater than the cost savings would warrant; yet the pleasure and relaxation obtained by the hobbyist may balance the account, if the work doesn't make undue demands on his finances and time needed for rest.

The greatest failing of the average "do-it-yourselfer" is to overestimate his abilities. He will purchase a pattern for a piece of furniture from an advertisement in a newspaper or magazine, obtain the necessary lumber, and start his project. After several evenings or a week end

of cutting the lumber, he attempts to fit it together and finds "it just won't work." He then realizes he should have begun his approach to being a craftsman with a simpler project and a better planned pattern.

Before starting any type of home shopwork, the householder should make certain he has the basic tools necessary to do the job at hand. There are a few hand tools which are necessary to do even the simplest jobs. Included should be a crosscut saw, wood chisels, wood file, C-clamps, hammer, planes, screw drivers, coping saw, measuring tape, square, nail set, breast drill and set of drills, or brace and bits, and pliers.

Probably the most important thing to check for in selecting a plan or pattern is the instructions and their clarity. Can they be easily understood and followed? Second, is there a list of materials; and third, is there a sketch that shows the most economical way to cut the material used?

A study of plans and patterns at Consumers' Research included all types. Most were just sketch plans giving details, in perspective, of various parts. Some were patterns which had to be cut out and traced; with these, there were drawings of details. Others had a sketch drawn on a pattern of squares which the user had to enlarge to use. Still another type was designed to be laid out on the wood and an imprint made by ironing over the pattern with a warm iron. Many would be useless to any but an experienced craftsman; others were well designed so that they could be used by the most inexperienced amateur.

Most of the patterns examined by CR were purchased from magazine advertisements and articles in home hobbyist, experimenter, and homeowner publications. Advertising for the patterns included such claims as "from cutting to finishing, the making is foolproof . . . clearly illustrated guide sheets that's like having a master craftsman at your side" or "lay the pattern on the lumber, trace, saw, smooth edges and put the pieces together. It's as easy as that . . . you can't make a mistake."

These claims were reasonably correct for some patterns, but most of those checked were far from being as good as the advertisement would lead the reader to believe. An example was a blueprint obtained from Popular Mechanics Magazine of a Martha Washington Sewing Cabinet which didn't include a list of materials or directions for assembly, though there were suggestions on kind of lumber, finishing, and gluing. The sketches showed a fluted design for the legs, but very inadequate instructions as to how this

detail was to be executed. It would be a difficult project for the skilled craftsman and would certainly be far beyond the capacity of the amateur, even one with considerable experience.

Not all Popular Mechanics patterns and plans were of this kind. Many were of the cut-and-trace type which were more easily followed and much simpler to use.

Very different from the Popular Mechanics pattern for the sewing cabinet was an American Home Magazine blueprint pattern of a cobbler's bench. This gave a general perspective picture, and an exploded assembly perspective of the entire piece. There was a complete set of instructions and materials list, even to the size and number of brads needed, and a diagram showing how to cut out the materials in the most economical manner. This was a good example of how well a pattern or plan can be presented, to make it easy for the amateur to follow. The only difficult operation on this project would be copying on squared paper a pattern of the bottom and sides of the bench as given on a smaller scale on the pattern furnished.

A third type of pattern was the *Easi-Bild* build-it-yourself full-size pattern of a rather ornate wall shelf. This was to be cut out and the outline traced on the material. The *Easi-Bild* included a complete material list and a good set of easily followed instructions. It took only a short time to cut out the pattern parts. When these were placed on the material, traced, and the parts cut, the fit was found to be good.

The widely publicized McCall's "iron-on" pattern was probably the most difficult to use, although it should be credited with having a well written and understandable set of assembly instructions. The pattern used in CR's study was for a wall desk. In placing the paper on the material and ironing on the pattern, there was a tendency for the lines to be broken at the corners, and in some cases lines were not at all straight, due to the folds and wrinkles in the pattern. Although much care was taken to smooth the pattern, it was a tedious task to get a satisfactory transfer of the necessary cuts. The technician doing the study found it much faster and more accurate simply to measure the size of the pieces from the pattern and then proceed to cut them, rather than to use the iron-on technique which was the basis of this particular pattern. The wall desk was then relatively easy to assemble, by following the instructions.

Of the large number of patterns and plans studied, only about 50 percent could be said to be satisfactory and capable of being easily and conveniently followed by the average amateur.

craftsman. The others were either poorly presented or were deficient in important respects as to instructions and details.

To sum up, the home hobbyist with limited experience should not attempt to construct something far beyond his abilities, and before buying tools and materials, he should study the plan or pattern he intends using to make sure that he can follow it and complete it successfully. He should be sure the pattern or plan chosen is of a type he can use to advantage. Above all, he should start out on a small scale; it's not wise to spend a lot of money, perhaps two

or three hundred dollars or so, for expensive hand tools and power tools to make an article at a direct cost of \$25 which he could have purchased for \$50 or so in a store. Unless, of course, he doesn't need the money and just likes to have a lot of nice tools in the basement, to look at and show to admiring friends.

Note: Addresses of distributors of patterns mentioned in the foregoing article are: McCall Corp., 230 Park Ave., New York City; Easi-Bild Pattern Co., Pleasantville, N.Y.; Popular Mechanics Press, 200 E. Ontario St., Chicago 11, Ill.; American Home Pattern Dept., P.O. Box 296, Forest Hills, N.Y.

Snow-Melting Systems

EMBEDDED PIPING is coming into use for clearing ice and snow from sidewalks, steps, driveways, roads, and areaways. While a majority of installations use a separate boiler, the use of the main heating boiler is often feasible for a residential application. Most heating systems are designed to provide the house with adequate heat at an outdoor temperature of zero Fahrenheit. Since most snow falls at temperatures between 10°F and 35°F, the heating system will ordinarily have a comfortable margin for snow melting, usually without any great sacrifice of comfort in the house. Hot-water heating systems are preferable to steam in snow melting for several reasons.

As a general rule, a snow-melting system is designed to melt one inch of snow per hour. An allowance of 100 Btu per hour per square foot of melting surface usually meets this rate satisfactorily. Water temperatures ranging from 110°F to 180°F have been used successfully; generally, however, the slow action of water as cool as 110° is a disadvantage, while temperatures as high as 180° may set up undesirable stresses in the system; about 160°F is probably a good working temperature. Both 1½-inch pipe on 18-inch centers and 1-inch pipe on 15-inch centers have been found to perform well, but closer spacing would often be desirable. From all heating and structural standpoints, piping placed on the sub-fill and then covered with concrete or asphalt

is satisfactory. Cinders, slag, and other sulphur-bearing materials should not be used for fill.

An anti-freeze solution must be used in snow-melting systems. The most popular are the ethylene-glycol-base solutions. However, the consumer is cautioned that since ethylene glycol is toxic, no connection should ever be made through a pipe or valve between a snow-melting system and a water system which may at any time be a source of water for human consumption. While an automatic fill-up valve used in conjunction with a check valve might prove safe in most instances, the possibility of valve leakage and backflow into a potable water supply makes it absolutely necessary to run no risk; one should therefore fill the system manually with the required amount of water, through a hose, perhaps, with the necessary amount of anti-freeze mixed in.

For home use, melting systems are planned for intermittent operation with manual control. In large installations, it is possible to provide automatic control, with a detector, consisting of a sensitively balanced metal plate which operates an electric switch when snow falls.

Valuable references on this subject are How to Design, Operate, and Install Snow Melting Systems, in the technical journal Heating, Piping, and Air Conditioning, for December 1948. A 35-page pamphlet on Snow Melting Systems is available (no charge) from A. M. Byers Co., 1501 Clark Bldg., Pittsburgh.

Problems in Buying a Rug

THE small chenille cotton bath mat and bedroom rug that could be tossed into the home washing machine and quickly cleaned brought about a revolution in the rug industry.

There was a time when carpets and rugs for rooms other than the bathroom, and perhaps the bedroom, were wool and woven according to traditional patterns and constructions, chiefly Axminster, Velvet, and Wilton. Carpet wool, however, comes from overseas. Argentina, which used to supply about 60 percent of the wool used in American carpeting, had a government monopoly on its export and steadily increased prices. Unsettled conditions in the Orient, another source of the raw fiber, made increasing supplies from that locality out of the question.

As the cost of carpet wool increased, the price of carpets necessarily went higher until the homemaker simply refused to pay the prices the dealers asked. Manufacturers of woven carpets endeavored to substitute fibers such as rayon, cotton, or blends, for wool, but the traditional weaving process still made them too expensive. Then manufacturers who made bath mats by a simple punching or tufting technique, without the slow weaving process, came along with larger carpets, using cotton and rayon fibers in brighter colors, at lower prices, and the new product swept the market. In fact, in the moderate and low price fields, the tufted carpet has almost wiped out the conventional woven wool carpets.

The earlier tufted rugs had a number of disadvantages, which are gradually being overcome. Some of the causes of complaints have been analyzed by the National Institute of Rug

Cleaning for the benefit of their members since the difficulties often land on the rug cleaners' doorstep as they come to light when the rugs are cleaned professionally. Some early failures were due to the kind of binding or cementing material (latex) used in the backing to make the rugs lie flat on the floor. This deteriorated with rapid aging and became brittle and cracked. Another difficulty from one type of backing cement was that it apparently contained a strong acid which weakened the tufted rugs and made them tear easily. Still a third difficulty was that some of the latex backings turned brown and discolored the rug. Many of these defects have been corrected in rugs now being manufactured. At least one company (American Viscose) has done considerable research in the field and come up with a satisfactory fiber especially processed for effective use in carpets.

The tufted rugs may be made of cotton, rayon, nylon, or even wool, as well as blends of two or more fibers. The rugs of man-made fibers are, as a rule, lower in price. The chief advantage of using rayon, acetate, and cotton is that the colors are brighter and lighter after the fibers are dyed. It should be kept in mind, however, that light colors will show soil more quickly than darker shades or mixed patterns.

There was a time when women bought rugs to last a lifetime, but this no longer is a characteristic of consumer choice. Dealers complain, however, that consumers are greatly dissatisfied with the poor wearing quality of low-priced carpets of rayon and rayon-nylon blends, particularly in heavy traffic areas, such as the living or dining room. On staircases, one dealer has suggested to consumers that they buy an extra piece in order to replace the worn strip with the same color match within two or three years. Dealers also report dissatisfaction with the rapid soiling of rayon compared to wool. On the other hand, there are several products now on the market for treating rugs at the time of manufacture and when they are cleaned by a professional rug cleaner, to prevent rapid soiling, including *Dellay* and *Ludox* which are being promoted as a solution to the problem.

One important fact to keep in mind with the new tufted rugs, particularly those made of cotton, is that they should be washed by a professional cleaner at least twice a year, since it is difficult to get them satisfactorily clean if they



Cross section of one of the new tufted rugs showing the backing and the depth of the pile.

are allowed to get too dirty. The on-the-floor shampooing technique has been considered unsatisfactory because dirt needs to be rinsed out thoroughly, and this can be done only in a cleaning plant. With wall-to-wall carpeting, the twice-a-year taking up and putting down of the living room or dining room rug is something of a bother and expense which should be weighed against the saving gained by the lower price paid for the carpet in the first place.

In spite of reports of complaints about the wearing quality of tufted rayon carpets that have appeared in the trade press, mill executives insist that the better grades are showing up well in service. They suggest that advertising has gone overboard in holding out to consumers the promise of miracle fibers, and they point out that even wool does not offer good performance in a rug of cheap construction. The tufted rayon rug of good quality is one that has the surface yarn tightly packed, with good density. The height of the pile is important, but not nearly so much so as the density, the number of fibers per square inch. As a matter of fact, there are some indications that the higher the pile, the greater the number of complaints about crushing, which gives an uneven and unsatisfactory appearance, since rayon does not have as good crush recovery as wool. One mill reports that if rayon surface yarn is tightly packed complaints will be much less serious than if it is loosely woven or tufted, even if this lack of closely set fiber is offset by a higher pile.

On a price basis, it is considered that tufted rayon when new gives the appearance of a luxury fabric at a moderate price. It has more resilience and better luster than tufted cotton. The chief advantages of the tufted carpets are their washability, brighter colors, and lower initial price. Whether on an over-all basis they are cheaper, taking into account the twice-a-year professional cleaning indicated in wall-to-wall carpeting, for example, will depend somewhat on whether the homemaker can do part of the job of taking up the carpet and preparing it for the cleaner herself and re-laying it when it is returned. Where the cost of maintenance is an important item, as in the case of a large wall-to-wall installation of a pastel shade, it probably will be more economical to purchase an all-wool rug rather than one made with one of the new fibers.

Just what most women want in a rug is a matter of debate. An attractive appearance and easy maintenance are undoubtedly two important factors. One rug cleaner considers retention of good appearance after cleaning one of the most desirable characteristics, and he points out that the National Institute of Rug

Cleaning has found that the density of the pile of a rug is what governs its appearance after cleaning, as well as its durability.

Some of the discontent with new carpets, he feels, is due not entirely to the techniques of construction and the kind of fibers used, but to the fact that homes and living habits have changed. Picture windows, for example, let in more sun, which will tend to speed up fading and color changes. Pastel shades and monotones rugs which are currently fashionable show dirt and graying of color in use. The floral patterns and mixed figures of the woven rugs are known to show less color change and soil than monotones. Television has been an important factor in accelerating wear because it keeps people at home more and increases the use of certain areas of the living room. The particular rug cleaner mentioned recommends that throw rugs be placed in areas in front of chairs and other furniture used by those who are watching television, to take the wear of the feet. He points out that, all in all, we give rugs harder wear than we used to.

One large department store finds that its second largest number of complaints, after the complaint that carpets do not wear as well as desired, is change of color. It should be kept in mind that change of color in a rug is often due to soiling, which gives the effect of a change of shade. Dust and dirt make colors dull, particularly light or pastel shades. Cotton and rayon have a brighter, clearer color when dyed because they are white to start with, whereas wool is never white but is slightly yellow or off-white. Both cotton and rayon, however, show soil more quickly than wool and hence come in for more complaints. How effective the new soil retardant substances, such as *Ludox* and *Dellay*, will be remains to be seen. On the basis of present limited experience, it is much too early to predict whether they will eliminate the soiling of a rug or greatly lengthen the time before cleaning. The retardant chemicals are considered by some to be effective on crimped staple rayon, but not necessary on the smooth staple.

On the matter of wear, there is no question but that a good-quality all-wool rug woven on the traditional looms, as for example a Wilton, will have top wearing quality. On a price basis, however, it is suggested that the new cotton and synthetic tufted rugs will give satisfactory service. One rug buyer reported that it was his experience that most women expected about 15 years' life for a rug, although some rug manufacturers like to suggest six years as the probable wear life.

The National Rug Company of Oklahoma City offers a guarantee program with the carpets it sells, based on a formula which takes into account a number of factors, including the price paid for the carpet. According to Retailing Daily, which described the program, only carpets priced at \$4.95 and up per square yard are included in the guarantee, and the minimum price carpet carries only a three-year guarantee. It appears that the better mills unconditionally guarantee their carpets for only about two years on the theory that if there are real defects they will show up within this 24-month period.

Another dealer issues a chart for customers' guidance, showing the probable life expectancy of various rugs and carpets based on price and estimates depreciation according to a carpet's number of years on the floor. The plan is based on the belief that there is not a carpet on the market that is good for more than 10 years' service. Prices range from \$3.95 to \$6.95 per square yard for a three-year rug to \$13.95 to \$15.95 for a 10-year rug. Apparently weave and fiber are not taken into account in setting up this method of evaluating wear life.

Perhaps these examples will give some idea of the wear life to be expected from present-day carpets. To sum up general observations in the current carpet picture:

(1) Long life and durability are to be found primarily in a woven carpet of wool fiber, which initially will be somewhat higher in price than

the new tufted rugs made of other fibers.

(2) In wall-to-wall installations, it will be advisable to use wool carpet to keep to a minimum the expense and inconvenience of the taking up of the carpet for cleaning by a professional cleaner.

(3) Where bright colors are desired and heavy traffic is not a factor, rayon and cotton in the new tufted rugs will provide attractive floor coverings at a moderate price.

(4) In heavy traffic areas, as in an entrance hall and on stairways, dark colors in the synthetics and cotton, or dark colors and floral patterns in wool are indicated.

(5) Buy an extra strip to be used later in heavy traffic areas where it is important to retain matching construction and color over a period of time.

(6) Before purchasing a pastel rug, check your local facilities for the cost of cleaning rugs professionally. If you live in the country or a suburban area, it may be costly to secure such service.

(7) Always buy a rug or carpet from a reliable merchant who can be depended upon to make replacement if failures or defects develop in an unreasonably short period of service. A bargain may turn out to be expensive if it has a short life and the merchant from whom you bought it is no longer in business or washes his hands of any responsibility to make good for a poor product.

Cleaning Whitewall Tires

WHITEWALL TIRES add to the appearance of an automobile, if they are clean, but detract from its appearance when they are dirty and neglected. In recent months a large percentage of new cars have been equipped with whitewall tires, which means that many car owners are seeking a quick and easy method for cleaning their whitewalls.

This article is intended to help in this problem. We describe below the various methods from which the car owner can choose and decide which is faster and easier for him.

1. There are any number of chemical cleaners on the market for cleaning whitewall tires. These cleaners are sold in cans or jars and can be applied by brush, sponge, or cloth, or even sprayed on. Most of these require approximately one minute for each tire, and they do a very satisfactory job. Scuff marks usually require additional rubbing with a brass bristle brush, sold for this purpose, which is similar to the brush used for cleaning suede shoes, but larger. The chemical cleaners used for cleaning tires are

strongly alkaline and should be rinsed off well.

2. Any good synthetic detergent, such as *Fab*, *Surf*, or *Tide*, when used with steel wool or a brass bristle brush, will do a satisfactory job. The use of steel wool, or steel wool sponge impregnated with soap, however, has one disadvantage in that the sharp particles may abrade the fingers somewhat, and often small slivers of the steel wool will get under the skin.

3. Scouring powder, such as is used in the home for cleaning sinks, etc., makes a good abrasive for cleaning tires, when applied with a scrubbing brush or cloth.

The important thing to remember in cleaning a tire, regardless of the method used, is to avoid causing scratches in the tire sidewalls, as such scratches will often develop prematurely into cracks or breaks. Such scratches would be produced by over-vigorous use of a stiff wire brush or of coarse grit in scouring a tire.

No matter what method is used, it will take a good deal of work to keep the tires looking clean and white.

Ratings of Motion Pictures

THIS section aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines—some 19 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Box Office, Cue, Daily News (N. Y.), The Exhibitor, Films in Review, Harrison's Report, Joint Estimates of Current Motion Pictures, Motion Picture Herald, National Legion of Decency, Newsweek, New York Herald Tribune, New York Times, The New Yorker, Parents' Magazine, Release of the D. A. R. Preview Committee, Reviews and Ratings by the Protestant Motion Picture Council, The Tablet, Time, Variety (weekly)

The figures preceding the title of the picture indicate the number of critics whose judgments of its entertainment values warrant a rating of A (recommended), B (intermediate), or C (not recommended).

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure	mel—melodrama
bio—biography	mus—musical
c—in color (Ansco, Eastman, Technicolor, Trucolor, Warner Color, etc.)	mys—mystery
car—cartoon	nov—dramatization of a novel
com—comedy	rom—romance
cri—crime and capture of criminals	sci—science fiction
doc—documentary	soc—social-problem drama
dr—drama	trav—travelogue
fan—fantasy	war—dealing with the lives of people in wartime
hist—founded on historical incident	wes—western

A	B	C	
—	5	4	Abbott and Costello Meet the Mummy com AYC
—	8	6	Adventures of Sadie, The (British) com A
7	9	2	African Lion, The doc-c AYC
—	5	11	Ain't Misbehavin' mus-cont-c A
—	—	3	Air Strike war-dr AY
—	4	1	All that Heaven Allows dr-c A
—	3	9	Angela mel A
—	1	9	Apache Ambush wes A
—	2	3	Apache Woman wes-c AYC
—	3	3	Artists and Models mus-com-c A
1	6	3	Bar Sinister, The dr-c A
—	3	8	Bed, The (French) com A
—	1	8	Bengazi mel AYC
—	—	3	Betrayed Women soc-mel A
—	1	10	Big Bluff, The mel A
1	5	11	Big Knife, The dr A
—	9	5	Blood Alley war-dr-c A
—	7	1	Break to Freedom (British) war-mel AY
—	6	3	Bring Your Smile Along mus-com-c AY
—	2	3	Case of the Red Monkey (British) mys-mel AYC
—	8	5	Chicago Syndicate cri-mel A
—	—	4	City of Shadows cri-mel A
1	7	10	Cobweb, The nov-c A
—	5	6	Count Three and Pray dr-c A
—	12	2	Court Martial (British) war-dr A
—	3	9	Creature with the Atom Brain sci-mel A
1	3	4	Crooked Web, The cri-mel A

A	B	C	
1	7	—	Dam Busters, The (British) war-mel AY
4	8	5	Davy Crockett bio-g-c AYC
—	—	3	Day to Remember, A (British) com AYC
—	9	7	Deep Blue Sea, The (British) dr-c A
—	2	5	Desert Sands adv-c A
4	12	2	Desperate Hours cri-mel A
—	1	7	Devil Goddess adv AYC
—	4	3	Diabolique (French) mys-mel A
5	11	1	Divided Heart, The (British) war-dr AYC
—	—	3	Don Juan's Night of Love (Italian) mel A
—	—	8	Double Jeopardy cri-mel A
—	1	2	Dr. Knock (French) com A
—	1	6	Duel on the Mississippi mel-c A
9	4	—	Far Horizons, The mel-c AYC
—	6	10	Female on the Beach dr A
—	3	8	Finger Man cri-mel A
7	12	—	Five Against the House cri-mel A
2	3	5	Footsteps in the Fog cri-mel-c A
—	1	6	Fort Yuma mel-c A
—	6	9	Foxfire dr-c A
—	6	7	Francis in the Navy com AYC
—	3	4	Frisky (Italian) dr A
—	2	11	Gentlemen Marry Brunettes mus-com-c A
—	7	7	Girl in the Red Velvet Swing mus-dr-c A
—	—	10	The mus-com-c A
2	4	2	Girl Rush, The mus-com-c A
—	9	5	Good Morning, Miss Dove dr-c AYC
2	12	—	Great Adventure, The doc AYC
—	1	9	Green Magic trav-c A
—	4	5	Gun that Won the West, The wes-c AYC
—	5	3	Guys and Dolls mus-com-c A
—	2	1	Hamido (Egyptian) mel A
—	1	5	Headline Hunters dr AYC
—	—	4	Hill 24 Doesn't Answer (Israeli) war-dr AY
1	2	9	Hiroshima (Japanese) propaganda-war-dr A
—	—	4	Hold Back Tomorrow dr A
1	11	2	House of Bamboo cri-mel-c A
—	13	3	How to Be Very, Very Popular mus-com-c A
—	5	9	I Am a Camera dr A
—	6	4	I Died a Thousand Times cri-mel-c A
—	4	8	Illegal cri-mel A
—	—	—	It's a Dog's World (see Bar Sinner, The)
—	4	10	It's Always Fair Weather mus-com-c A
1	6	9	Kentuckian, The dr-c A
—	1	7	Killer's Kiss mel A
—	—	4	King Dinosaur sci AY
—	9	4	King's Thief, The adv-c AY
1	3	2	Kismet mus-com-c A
—	1	9	Kiss of Fire adv-c A
—	4	5	Lady Godiva dr-c A
3	6	8	Land of the Pharaohs dr-c A
—	4	10	Las Vegas Shakedown mel A
—	11	1	Last Command, The hist-dr-c AY
—	5	1	Lastres Street, A wes-c A
—	1	6	Lay that Rifle Down mus-com AYC
2	11	4	Left Hand of God, The war-dr-c A
—	—	4	Lord of the Jungle mel AYC
2	7	6	Love is a Many Splendored Thing dr-c A
4	9	5	Love Me or Leave Me mus-bio-g-c A
1	6	4	Lucy Gallant dr-c AYC
—	3	4	Mad at the World soc-dr A
1	2	3	Maddalena (Italian) dr-c A
—	6	8	Magnificent Matador, The dr-c A
1	3	6	Man Alone, A wes-c A

A	B	C		A	B	C				
4	9	6	Man from Laramie, The	wes-c A	—	4	2	Tiger and the Flame, The (India)	dr-c A	
—	10	5	Man Who Loved Redheads, The (British)	com-c A	3	13	3	To Catch a Thief	cri-mel-c A	
1	5	—	Man With the Gun	wes A	1	15	1	To Hell and Back	war-dr-c AY	
—	1	2	Master Plan, The (British)	mys-mel A	—	2	4	Toughest Man Alive, The	mel A	
—	1	3	Mau Mau	doc-c A	—	7	1	Three Stripes in the Sun	war-dr A	
1	9	6	McConnell Story, The	war-biog-c AY	5	11	8	Treasure of Pancho Villa, The	mel-c A	
—	1	5	Midnight Episode (British)	mys-mel A	—	5	3	Trial	dr A	
12	4	2	Mister Roberts	war-com-c A	—	7	6	Trouble in Store (British)	com AYC	
—	10	6	Moonfleet	adv-c A	—	3	6	Trouble With Harry, The	com-c A	
—	3	3	Murder in Villa Capri	cri-mel A	1	7	6	Twinkle in God's Eye, The	dr AY	
2	11	5	My Sister Eileen	mus-com-c A	—	4	4	Ulysses (Italian)	fan-c A	
—	3	3	Naked Amazon, The	trav-c A	—	2	1	Umberto D (Italian)	dr A	
—	2	8	Naked Dawn, The	dr-c A	—	5	6	Vanishing American, The	wes AYC	
—	6	—	Naked Sea, The	doc-c AYC	1	11	6	View from Pompey's Head, The	dr-c A	
—	5	4	Naked Street, The	cri-mel A	—	4	2	Virgin Queen, The	hist-dr-c AY	
—	—	5	Night Freight	mel A	—	4	4	Wakamba	doc-dr-c A	
12	1	1	Night Holds Terror, The	cri-mel A	—	10	1	Warriors, The	adv-c AYC	
—	3	16	Night of the Hunter, The	cri-mel A	—	5	6	We're No Angels	com-c A	
—	3	1	No Way Back (German)	war-mel A	—	2	4	Wichita	wes-c AYC	
4	7	8	Not as a Stranger	dr A	3	6	6	Will Any Gentleman? (British)	com A	
6	9	2	Oklahoma	mus-com-c A	—	—	6	You're Never Too Young	mus-com-c A	
—	3	7	One Desire	dr A	—	—	—	—	—	
—	—	3	Open Secret	soc-mel A	—	—	—	—	—	
—	1	11	Pearl of the South Pacific	mel-c A	7	9	—	Reissues (oldtimers you may have seen before) as previously rated in the CR Bulletin indicated:		
1	6	9	Pete Kelly's Blues	mus-mel-c A	—	—	—	Anchors Aweigh		
1	9	4	Phenix City Story, The	cri-mel A	(March '46)	—	—	(March '46)	mus-com-c AYC	
—	2	1	Princess Cinderella (Italian)	fan AYC	1	5	9	April in Paris (June '53)	mus-com-c A	
—	4	—	Prisoner, The (British)	dr A	3	12	2	Asphalt Jungle, The (Dec. '50)	mel A	
3	10	2	Private War of Major Benson	com-c AY	5	7	3	Battleground (Apr. '50)	war-dr A	
—	9	7	Prize of Gold, A	war-mel-c A	4	10	3	Bend of the River (Aug. '52)	wes-c AYC	
—	10	5	Purple Mask, The	adv-c AYC	—	12	5	Berlin Express (Dec. '48)	war-mel AY	
—	4	8	Queen Bee	dr A	1	8	8	Big Sleep, The (Apr. '47)	cri-mel A	
—	7	—	Quentin Durward	nov-c AYC	—	12	1	Big Street, The (Jan. '43)	dr A	
—	1	2	Race for Life, A (British)	mel A	—	4	3	Black Eagle (Apr. '49)	dr A	
—	6	8	Rebel Without a Cause	soc-mel-A	13	5	1	Bringing Up Baby		
—	3	—	Rebound (British)	cri-mel A	4	11	1	(Di. Dec. '38)	com AYC	
—	6	2	Return of Jack Slade, The	wes-c A	2	13	2	Broken Arrow (Jan. '51)	dr-c AYC	
—	4	—	Road to Denver, The	wes-c AYC	—	7	2	Call Northside 777 (Aug. '48)	doc-mel A	
—	4	5	Robbers' Roost	mus-wes-c A	1	13	4	Carson City (Nov. '52)	wes-mel-c AYC	
1	3	3	Rose Tattoo, The	dr A	4	7	5	Champion, The (Nov. '49)	mel A	
—	2	12	Running Wild	soc-mel A	—	5	5	Cyrano de Bergerac (June '51)	dr A	
—	7	2	Santa Fe Passage	wes-c AYC	10	4	7	Dakota Lil (Sept. '50)	mus-wes-c A	
3	6	4	Scarlet Coat, The	hist-dr-c A	—	11	3	Day the Earth Stood Still	sci A	
1	8	8	Sea Chase, The	war-dr-c A	—	—	5	Every Girl Should Be Married		
—	6	3	Sea Shall Not Have Them, The (British)	war-dr A	1	1	4	(June '49)	com AY	
—	8	2	Second Greatest Sex, The	mus-com-c A	1	12	3	Green Dolphin Street (Dec. '47)	dr AY	
—	11	4	Seven Cities of Gold	hist-dr-c AY	3	11	4	Guy Named Joe, A (Aug. '44)	war-dr A	
2	12	3	Seven Little Foys, The	biog-c A	—	—	4	Home of the Brave		
4	9	5	Seven Year Itch, The	com-c A	2	8	5	(Jan. '50)	propaganda-dr A	
—	5	5	Shadow of the Eagle	adv-c A	5	12	5	House of Strangers (Jan. '50)	dr A	
—	9	—	Sheep Has Five Legs, The (French)	com A	1	2	7	I Remember Mama (Oct. '48)	com AYC	
2	7	8	Shrike, The	dr A	1	5	4	Ivanhoe (Jan. '53)	nov-c AYC	
—	3	—	Silver Star, The	wes AY	—	13	4	Miss Grant Takes Richmond		
1	9	—	Simba (British)	doc-dr-c A	3	11	4	(Apr. '50)	com A	
1	7	4	Sincerely Yours	mus-dr-c AY	—	—	4	Petty Girl, The (March '41)	com-c A	
—	3	—	Skabenga	doc-c A	—	—	3	Reap the Wild Wind		
—	9	9	Soldier of Fortune	adv-c A	4	9	4	(Nov. '43)	mel-c AYC	
—	14	2	Son of Sinbad	fan-c A	5	12	2	Return of October (July '49)	com-c A	
—	8	2	Special Delivery	com A	—	2	1	4	Shearat Trunk (June '46)	mel A
2	10	5	Summertime	dr-c A	9	6	—	She Wore A Yellow Ribbon		
1	6	5	Svengali (British)	dr-c A	2	11	4	(Apr. '50)	wes-mel-c AYC	
—	4	5	Tall Man Riding	wes-c A	—	8	4	1	Shepherd of the Hills (Feb. '42)	nov AY
2	7	4	Tall Men, The	wes-c A	—	—	1	2	Spellbound (June '46)	dr A
—	3	2	Tarantula	sci AY	—	—	1	1	Tall in the Saddle (July '45)	wes AYC
—	4	4	Target Zero	war-dr AY	—	—	4	4	They All Kissed the Bride	
—	2	3	Teckman Mystery, The (British)	cri-mel AY	—	10	7	(March '43)	com A	
—	3	6	Teen-Age Crime Wave	soc-mel A	9	6	—	Thieves' Highway (Apr. '50)	cri-dr A	
2	8	4	Tender Trap, The	com-c A	5	11	—	Third Man, The (July '50)	cri-mel A	
—	7	4	Tennessee's Partner	mel-c A	—	—	—	Twelve O'Clock High		
—	1	2	Terror in the Night	cri-mel A	—	—	5	(July '50)	war-dr A	
—	4	2	Texas Lady	mel-c AY	—	10	2	Where the Sidewalk Ends		
—	3	12	That Lady (British)	hist-dr-c A	4	6	6	(Feb. '51)	cri-mel A	
—	1	2	This Man is Dangerous (French)	mel A	1	14	1	White Christmas		
					18		5	(Apr. '55)	mus-com-c AYC	
							1	Window, The (Dec. '49)	mys-mel AY	
							1	Wizard of Oz (Di. March '40)	fan AYC	

The Consumers' Observation Post

(Continued from page 4)

great indignation that late in June inspectors were ordered from Washington to add a clause to all inspection certificates to the effect that their certification did not include the quality, freshness, or trim of the products inspected. As the magazine noted, this qualification made the certificate and inspection process about as useful as an air conditioning franchise at the North Pole. The effect of the order is to reduce the value of federal inspection of meat in this particular area so drastically that the steamship operators may be obliged to set up their own system and establish their own private standards of quality.

* * *

TWO CHEMICALS commonly used by the homemaker for household cleaning may have dangerous results. The National Safety Council warns against mixing ammonia and hypochlorite bleach (a liquid having a characteristic odor similar to chlorine gas) to speed the cleaning process by removing dirt, and bleaching at the same time. The gas which is formed when these two chemicals are combined is highly irritating and may be particularly dangerous with small children in a poorly ventilated kitchen or bathroom.

* * *

THOSE NEW BUILT-IN KITCHENS that are the subject of much discussion and interest, particularly to builders of new homes, need standardized dimensions if they are to be practical and effective. The experts point out that one reason for present high costs is that the various items come in far too many sizes. What is needed is a standard cabinet height, depth, and width in order to save manufacturers, distributors, and home buyers millions of dollars a year. One exception is the space allowed for laundry equipment. According to House and Home, only the tumbler-type washing machine can fit easily into a 24-inch depth and still handle the desired 8 or 9 pounds per load, and many washers as well as dryers require 32 to 36 inches, measured parallel to the wall. It looks as if on this score something's got to give.

* * *

SERVICE CHARGES for repairing small appliances are made on a flat rate basis by Vinson-Carter Electric Co., of Phoenix, Arizona. The firm has a

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scheduled rate for various types of repairs on coffee makers, deep-fat fryers, fans, mixers, roasters, and other items regardless of how long it may take to find the trouble and make the repair. After an exhaustive study of appliance repairs, according to Electrical Merchandising, which included handling labor, handling costs, general overhead, direct labor, and parts, the company set up a fixed price schedule. The consumer who wants an appliance repaired is thus advised at the outset what the charge will be, and he can then determine whether or not he wishes to spend the money to have the work done. Vinson-Carter is now the official service station for 48 major appliance manufacturers and serves the entire state of Arizona.

* * *

OVERUSE OF ANTIBIOTICS is developing a new strain of bacteria. In another 15 years it is quite likely that all staphylococci will be resistant to all antibiotics, according to Dr. R. M. B. MacKenna, skin specialist of London, England. Dr. MacKenna suggests that in treating certain skin infections it is wise for the physician to consider carefully whether an old stand-by, such as potassium permanganate, perchloride of mercury [British term for mercuric chloride], or one of the older antiseptics, may not prove to be more effective in treatment of skin infections than the more fashionable antibiotics.

* * *

"USING INSTALMENT CREDIT" is the title of a useful little booklet by Professor Clyde William Phelps, Chairman of the Department of Economics, University of South Carolina. In simple presentation, intended primarily for the use of high school students, the topics discussed include when to use the instalment plan of buying, how to calculate its cost, how to compare costs, some consideration on whether the financing charge is worth its cost, and other topics that give a clear picture of the technique of buying products on the instalment plan. Any arithmetic-minded consumer who would like to know just how to use this credit device most efficiently and determine what it is likely to cost him will be interested in skimming the book. In a country like the United States where the economy is geared to mass production of a wide variety of products, instalment buying is an important technique for making mass consumption practicable. Teachers in the consumer-economic field will do well to send for a copy. The booklet is available in limited quantity for classroom use without charge from the Commercial Credit Company, Baltimore 2, Maryland.

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CR-1-56

Phonograph Records

BY WALTER F. GRUENINGER

Please Note: The first symbol applies to quality of interpretation, the second to fidelity of recording.

Beethoven: *Concerto in D for Violin*. Milstein with the Pittsburgh Symphony Orchestra under Steinberg. Capitol P 8313. \$4.98. Many musicians would agree, I think, if they had to choose one violin concerto to live with, this would be it. Milstein's playing is solid, musically, a joy to hear. And he is very well supported and recorded. First-choice recording of this composition, supplanting the Heifetz-Toscanini Victor LCT 1010 which is not as well recorded. **AA AA**

Bizet: *The Pearl Fishers*. Angelici, Legay, Neguera, etc., under Chaytens. 4 sides, Angel 3524 B. \$10.96. The early Bizet opera that doesn't reach the heights of *Carmen* but has many fine, melodic moments. The recording is excellent—obvious depth and height and smooth. The performance stands out for the conducting of Chaytens. But the entire cast is good. It's a tossup between this and the competitive Epic SC 6002. **AA AA**

Bloch: *Quintet for Piano and Strings*. Johanna Harris with the Walden String Quartet. MGM E 3239. \$3.98. Passionate, energetic work which deserves frequent hearing. Expressive, sober performance. **AA A**

Borodin: *Prince Igor* (complete). Popovich, Heybalova, Zhunetz, Tzveych, etc., with chorus and orchestra of the Belgrade National Opera under Danon. 16 sides, London Set XLLA 30. \$24.90. Generally regarded as Borodin's greatest work though he died before finishing it. Rimsky-Korsakov and Glazounov finished it. The *Polyotian Dances* are familiar in this country, as an orchestral excerpt. The cast, particularly the ladies, doesn't fully meet requirements. The orchestra and the chorus aren't much better. Hi-fi recorded in Yugoslavia. . . . The competitive Period 552 recording presents a superior cast from Russia for that part of the opera commonly performed, but it is less well recorded. **B AA**

Copland: *El Salón Mexico & Grofé: Grand Canyon Suite*. Boston Pops Orchestra under Fiedler. RCA Victor LM 1928. \$3.98. Copland's vivid, spirited impression of a native Mexican dance hall continues to please me, whereas the thin, too literal Grofé has worn out its welcome. **AA AA**

Lalo: *Symphonie Espagnole*. Oistrakh (violin) with the Philharmonia Orchestra under Martinon. Angel 35205. \$4.98. Only the usual four movements of this exciting, romantic work. But Oistrakh plays with all the seriousness of a Beethoven concerto performance, missing the flair which Heifetz (Victor LM 127) and Milstein (Capitol P 8303) wisely bring to their recordings. Excellent fidelity. **B AA**

Mozart: *Don Giovanni*. Siepi, Corena, Dermota, Danco, etc., under Krips. 8 sides, London Set XLLA 34. \$19.92. One of Mozart's greatest works, recorded in Vienna, almost gets the superlative performance it deserves. Siepi lacks some of the subtlety the role demands, and Suzanne Danco is miscast. But the others are top-notch. And so is the direction and recording. Outranks competitive sets, including the new Epic SC 6010, featuring George London, which offers a cast, direction, and fidelity that is good but not excellent. **A AA**

Paganini: *Concerto No. 1 for Violin and Orchestra*. Krebbers with the Hague Philharmonic under Van Otterloo and *Concerto No. 4*. Grumiaux with the Lamoureux Orchestra under Gallini. Epic 4LC 3143. \$3.98. *No. 4* is the attraction. Paganini played it once. The manuscript was lost. So the music was not played again until a year ago when Grumiaux performed it in Paris. While it adds nothing outstanding to the repertoire, it is pleasant to hear the Paganini formula in a new setting. Grumiaux

and Krebbers, who play Paganini's most popular concerto overside, are excellent violinists. But they lack the brilliance and perfection to match the top men of our time. Except for a loss of quality near the label, very well recorded. **A A**

Schubert: *Die Winterreise*. Bogtman (bass). Epic LC 3154. \$3.98. The 24 songs which comprise this cycle included half a dozen of Schubert's greatest. The work belongs in every basic library. Epic squeezes the cycle on one disk, but offers no bands between songs, whereas others take two disks. Impressive performance, almost as good as that of Victor Carne, tenor, who sings more dramatically on Westminster WAI 203. **A A**

Schumann: *Dichterliebe and Other Songs*. Anton Dermota (tenor). Telefunken LGX 666023. \$4.98. Admirable lieder which Dermota performs with good variety of tonal effects. In the superb "Im Rhein" and in "Ich Grolle Nicht" more emotion would be welcome. Well recorded. **A AA**

Sibelius: *Symphonies Nos. 4 and 5*. Philadelphia Orchestra under Ormandy. Columbia ML 5045. \$4.98. The *Fifth* is more accessible, but both are beautifully played. The recording of the *Fifth*, however, is less true to the music in the inner grooves. **AA A**

Strauss: *Die Fledermaus*. Schwarzkopf, Gedda, Streich, Kunz under von Karajan. 4 sides, Angel 3539 B. \$10.96. Light opera masterpiece. Superb cast and recording. Some may find the German dialogue between numbers objectionable on repeated hearing. The competitive London LLP 281/2 is as well performed, just a little less effectively recorded, though it was tops for 1950. It omits the dialogue which is why I prefer it. **AA AA**

Tchaikovsky: *1812 Overture*, *Capriccio Italien* & **Rimsky-Korsakov:** *Capriccio Espagnol* and *Russian Easter Overture*. Orchestra of the Vienna State Opera under Rossi. Vanguard SRV 101. \$1.98. The works are conservatively played, if not best played in the catalog. Well recorded except for the innermost grooves. They are, of course, among the most popular in the orchestral repertory. Only \$1.98! **A A**

Verdi: *Aida*. Milanov, Barbieri, Bjoerling, Warren, etc., under Perlea. 6 sides, RCA Victor LM 6122. \$11.94. Bjoerling sounds more constricted in his high tones than I have ever noticed before, but in the mid-low register his tone is rich. Yet he is miscast for his is essentially a lyric voice in a dramatic part. Barbieri sings with unusual dramatic expression. Milanov offers everything but the fine spun, enchanting melodic line which was hers at one time. Warren is excellent. The orchestra plays haphazardly in a few dance measures, but otherwise is on the beat, which is firm. Superb direction and recording. Despite criticism, a worthy competitor to London XLLA 13. **A AA**

Weill: *Concerto for Violin and Wind Orchestra*. Anahid Ajemian with the MGM Wind Orchestra under Solomon & **von Webern:** *Four Pieces for Violin and Piano*. Maro and Anahid Ajemian (piano and violin). MGM E 3179. \$3.98. Kurt Weill composed the concerto in 1923, but it was first performed in America this spring by this group. Atonal—and strictly for the connoisseur who is looking for something "new." Well played but the fidelity is disappointing. . . . dead studio, limited range. Fascinating fillers are the atonal von Webern pieces. **A B**

Band Concert: American Symphonic Band of the Air under Revelli. Decca DL 8157. \$3.98. What a magnificent band! Brilliant recording and performance of 11 pieces—marches, a samba, a rhumba, a Berlioz overture, etc. **AA AA**



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